

VOL. XXXVII No. 10

OCTOBER 1952

MECCANO

MAGAZINE



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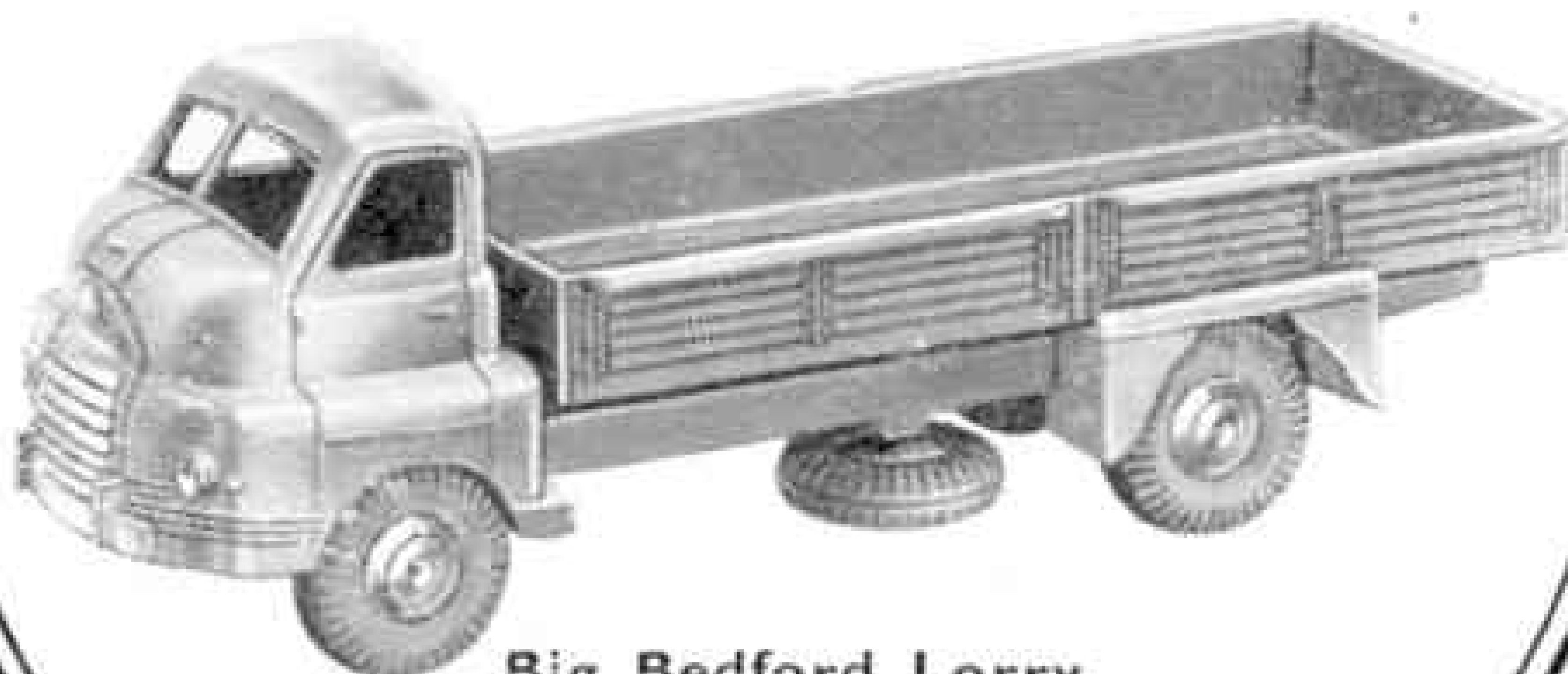
9p

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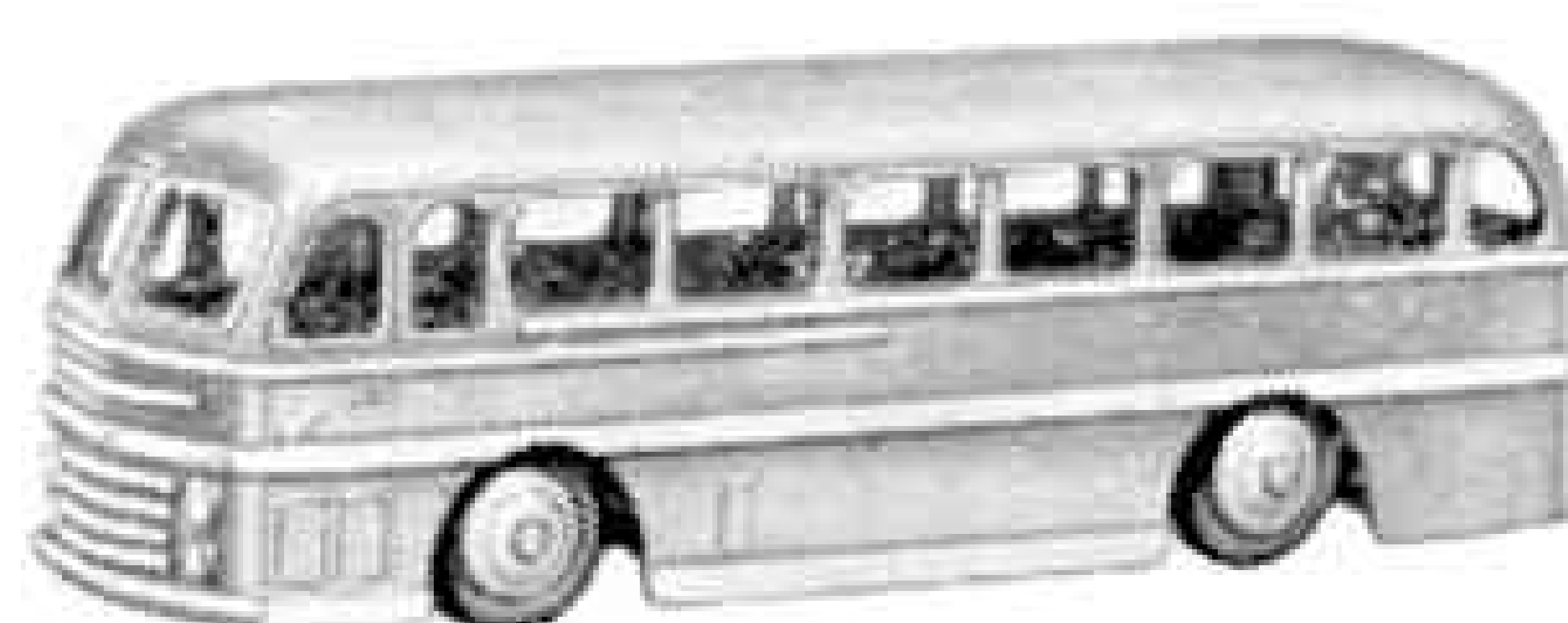


Big Bedford Lorry
No. 522

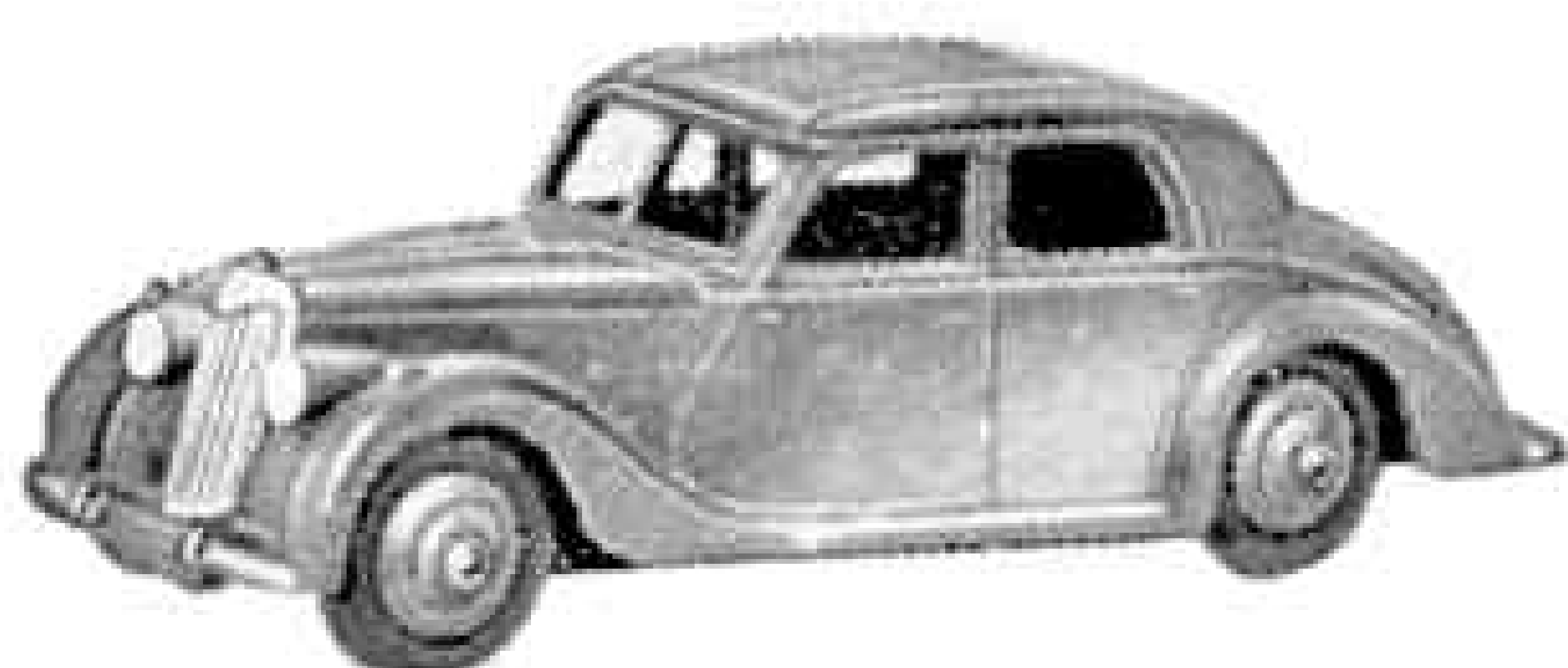
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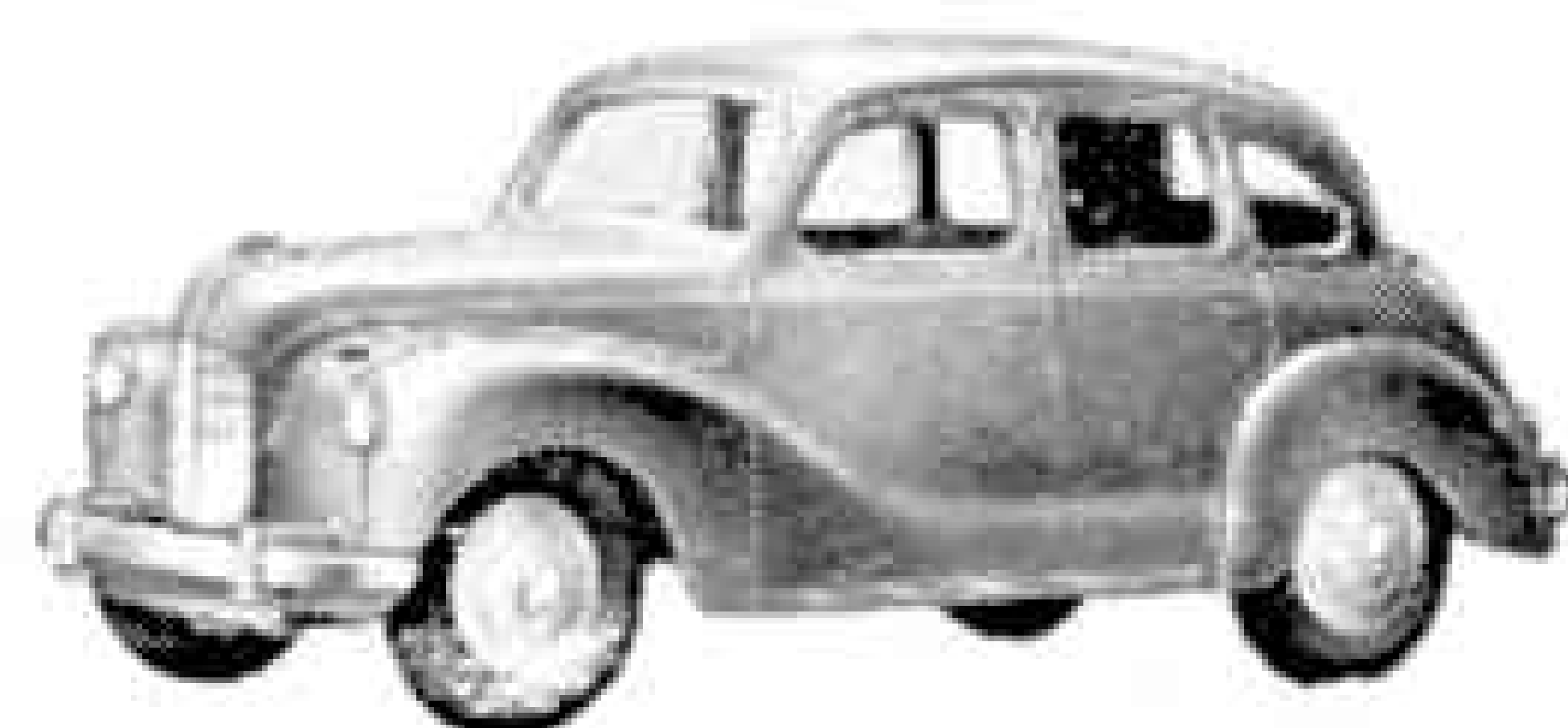
Duple Roadmaster Coach
No. 29h
4/4



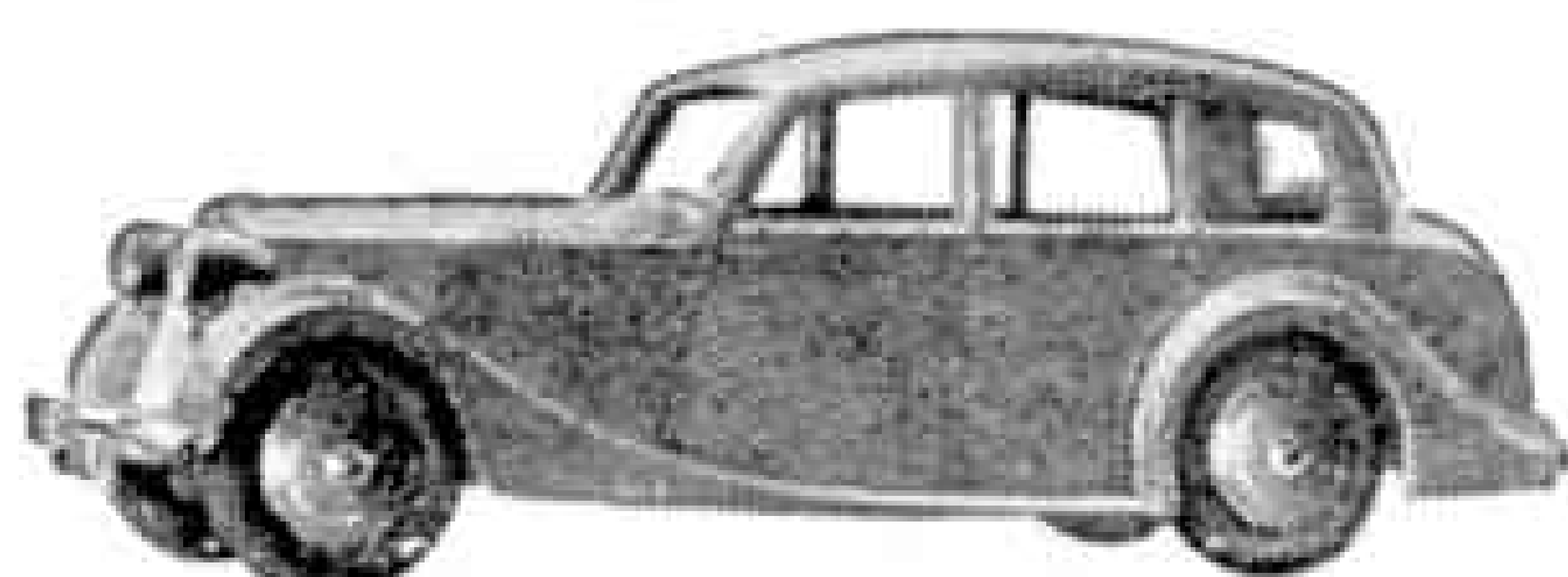
Riley Saloon
No. 40a
2/11



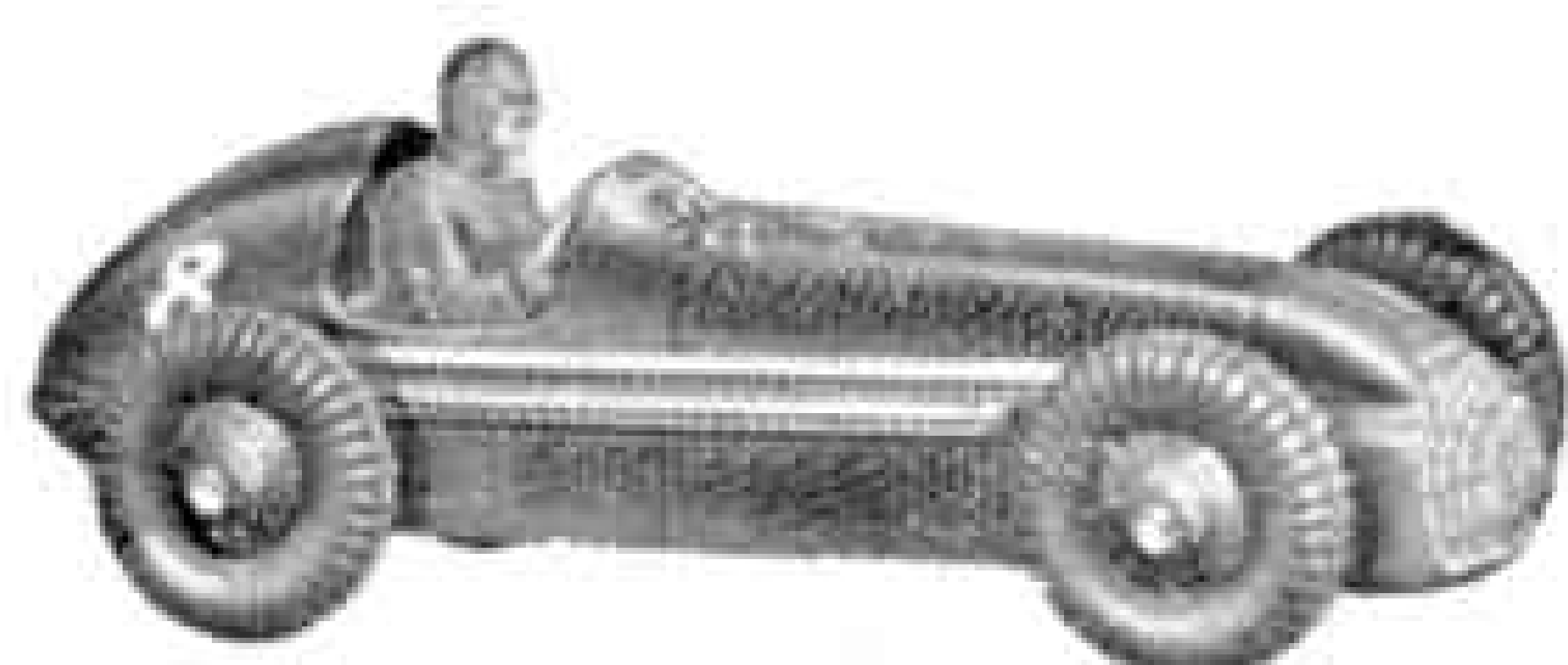
Austin Taxi
No. 40h
3/10



Austin "Devon" Saloon
No. 40d
2/11



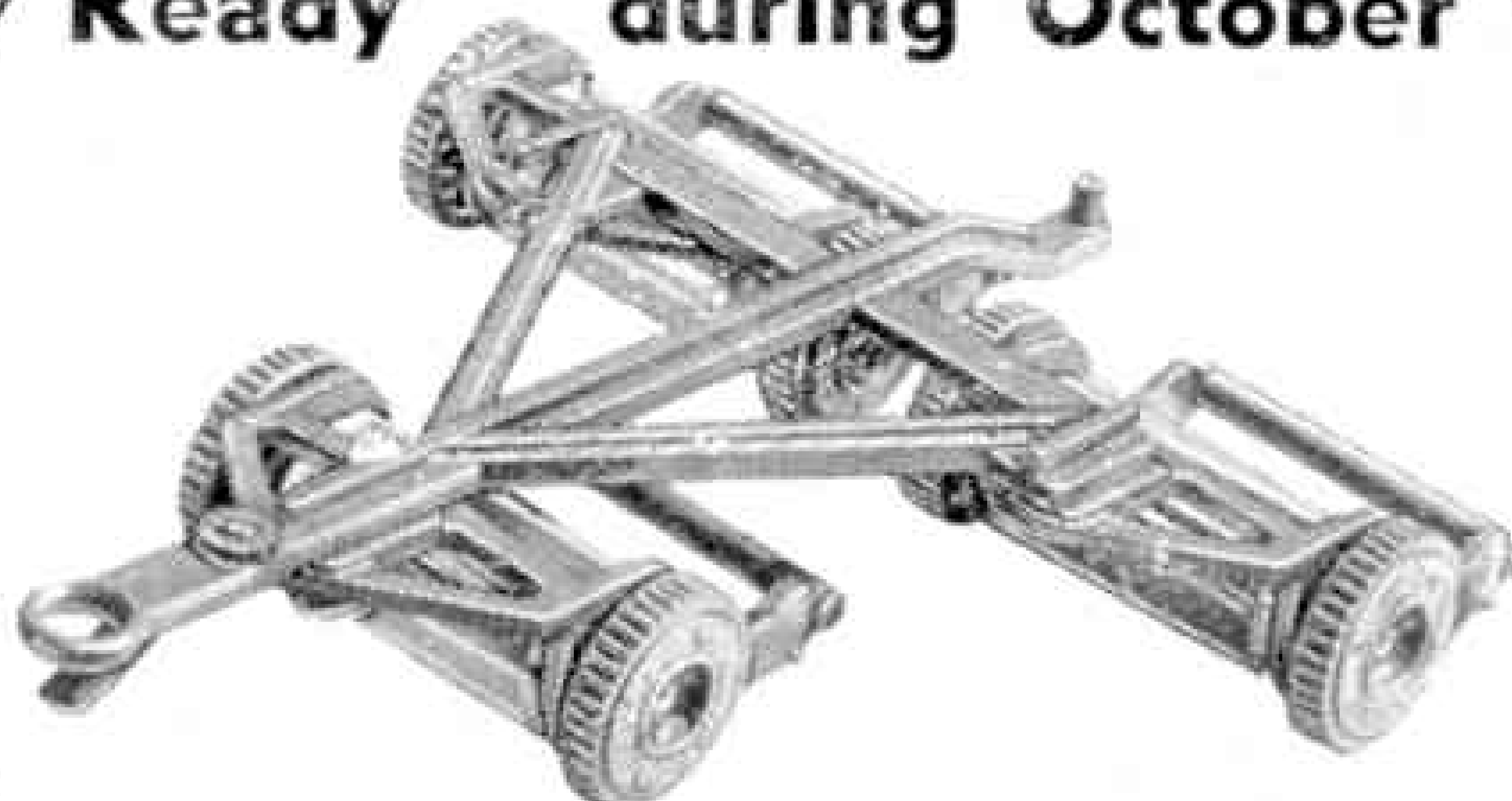
Triumph '1800' Saloon
No. 40b
2/11



Alfa Romeo Racing Car
No. 23f
3/1

NEW

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Triple Gang Mower
No. 27j

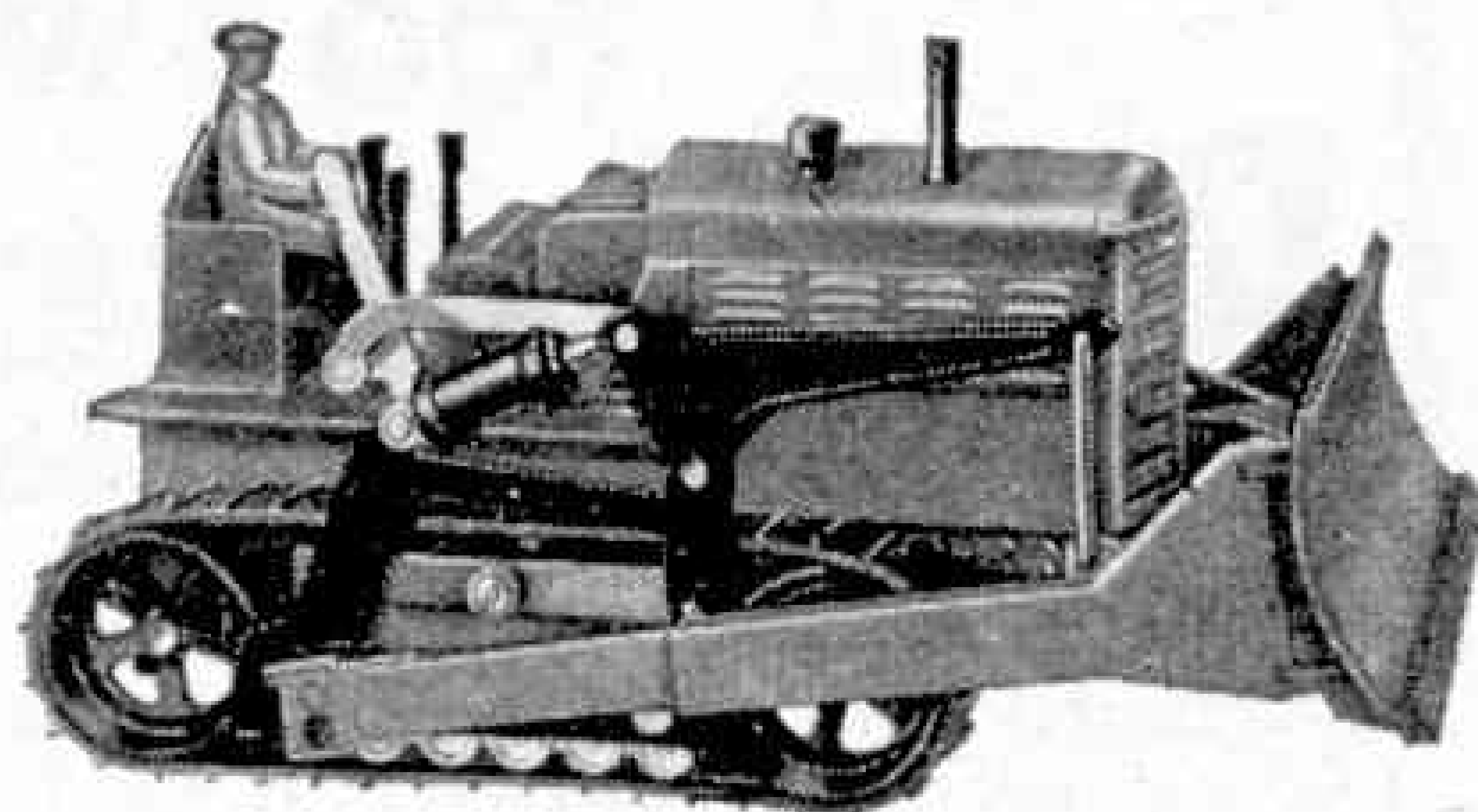
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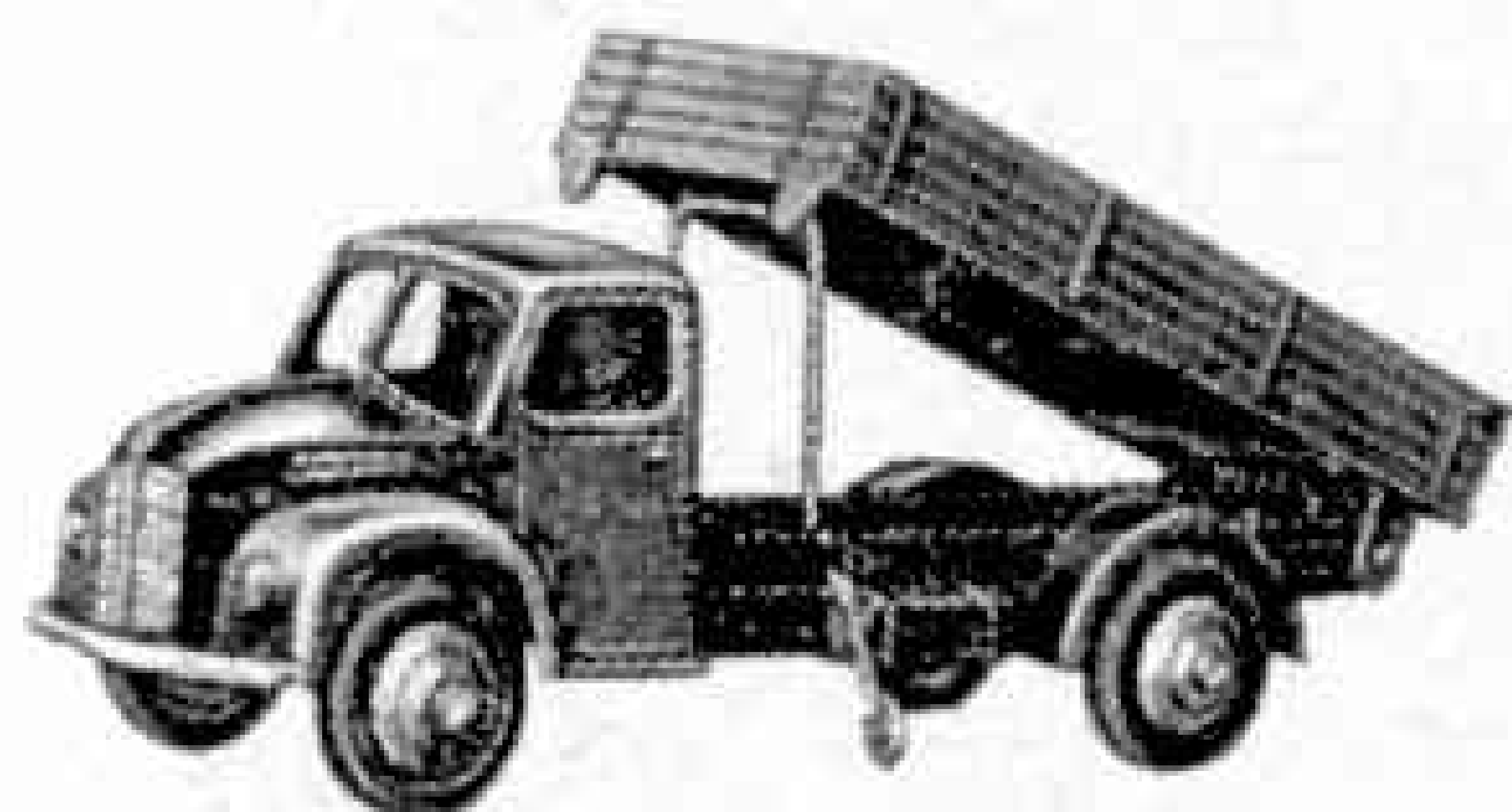
TRADE MARK REGD.



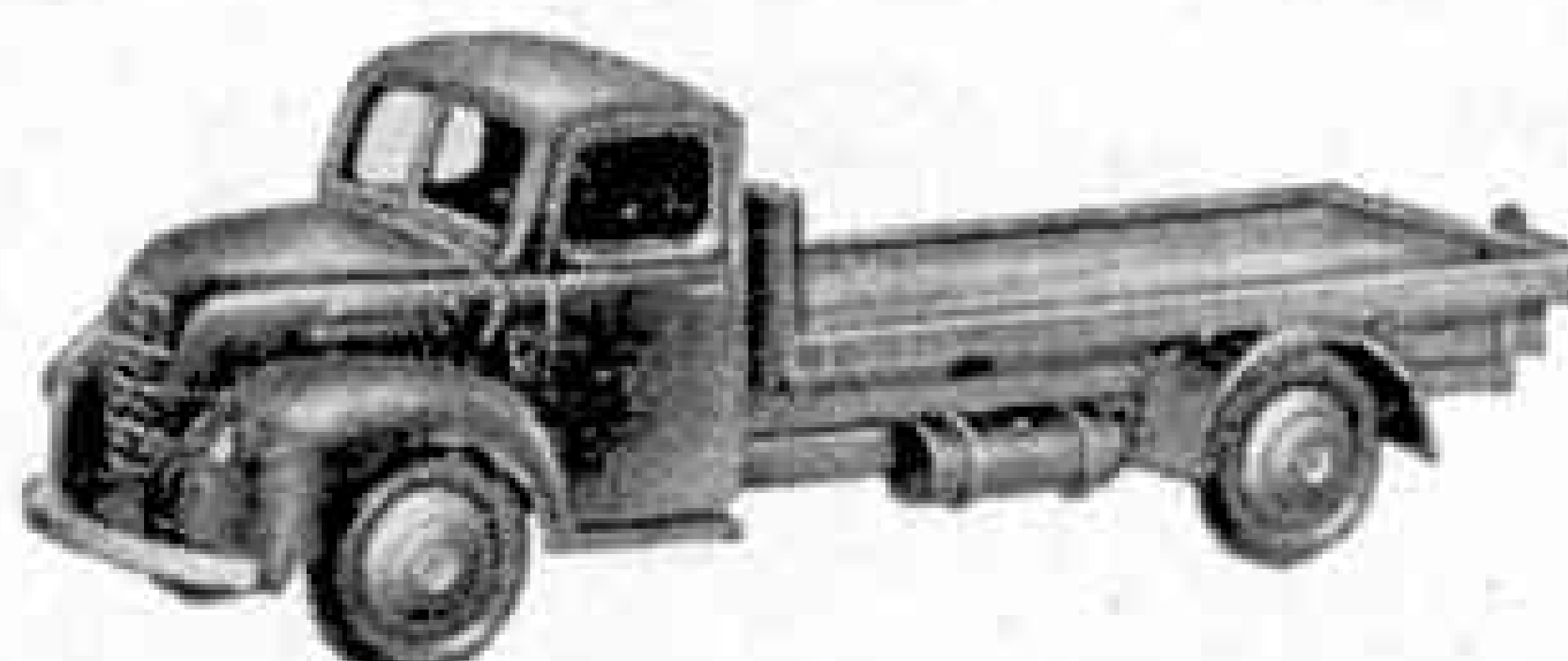
A.E.C. Tanker
No. 591
8/8



Blaw Knox Bulldozer
No. 561
15/2



Rear Tipping Wagon
No. 30m
3/11



Fordson "Thames" Flat Truck
No. 30r
2/11



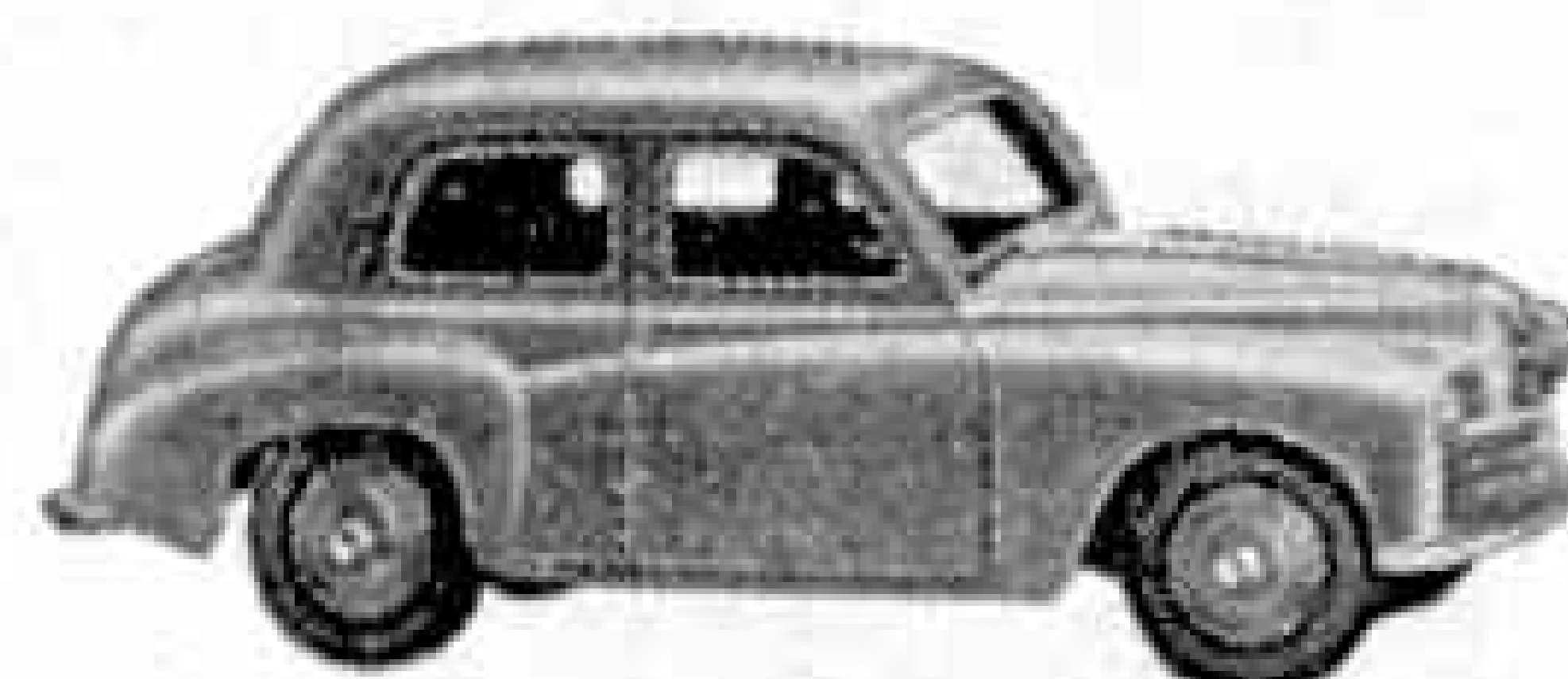
Daimler Ambulance
No. 30h
3/5



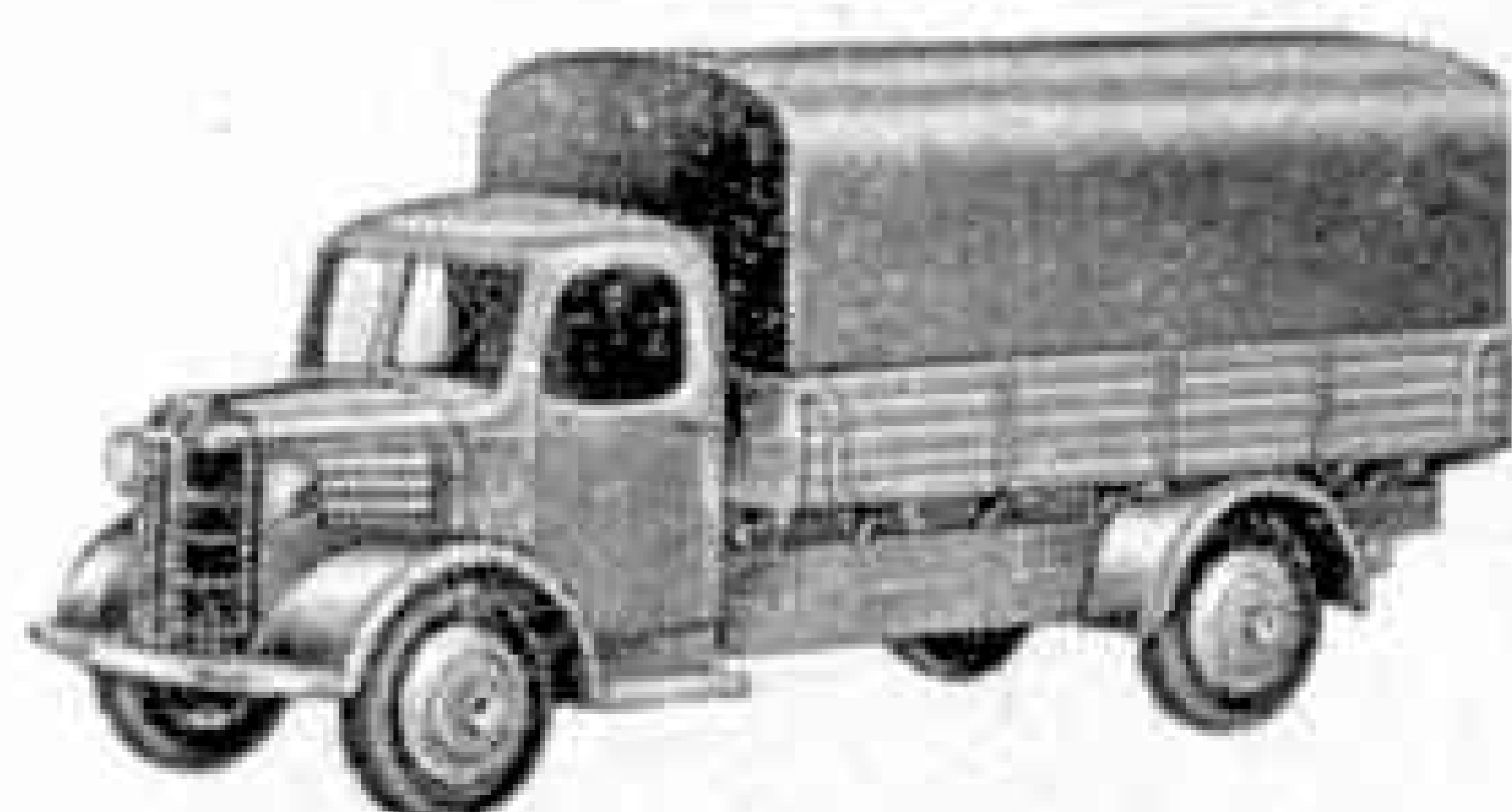
Ford "Fordor" Sedan
No. 139a
3/1



Austin
"Atlantic" Convertible
No. 140a
3/11



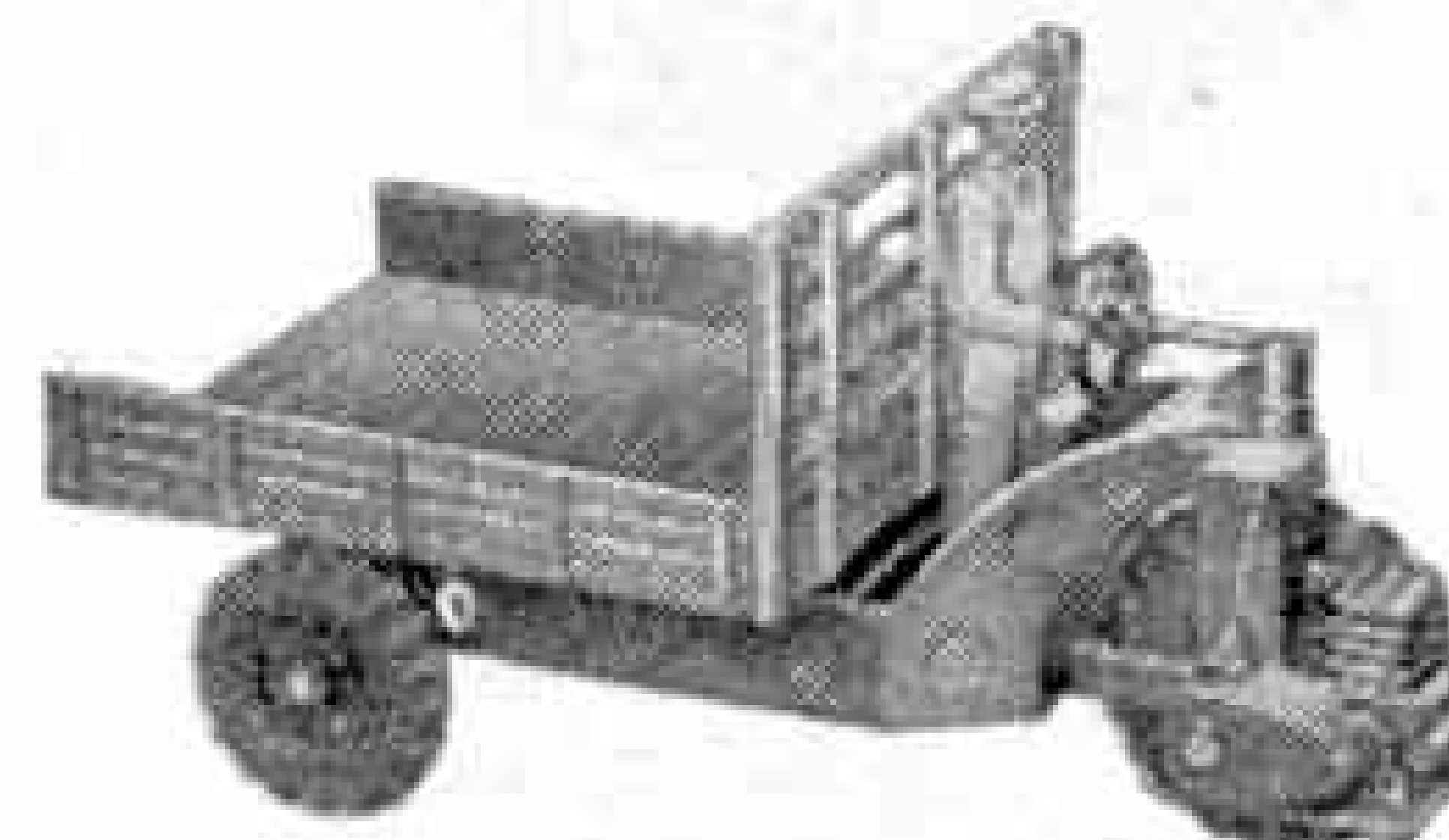
Hillman Minx Saloon
No. 40f
2/11



Austin Covered Wagon
No. 30s
3/6



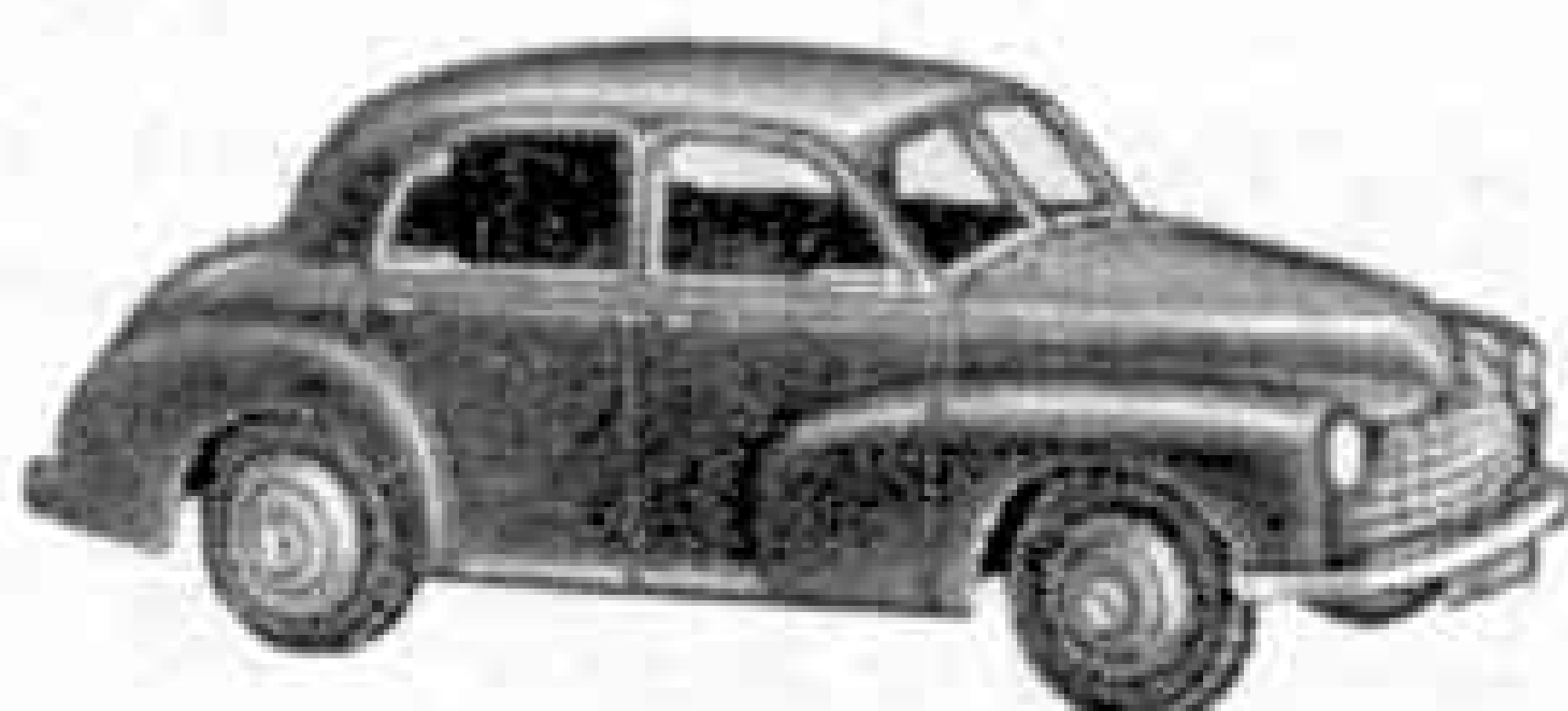
B.E.V. Electric Truck
No. 14a
3/1



Motocart
No. 27g
5/3



Rover 75 Saloon
No. 140b
3/9



Morris Oxford Saloon
No. 40g
2/11



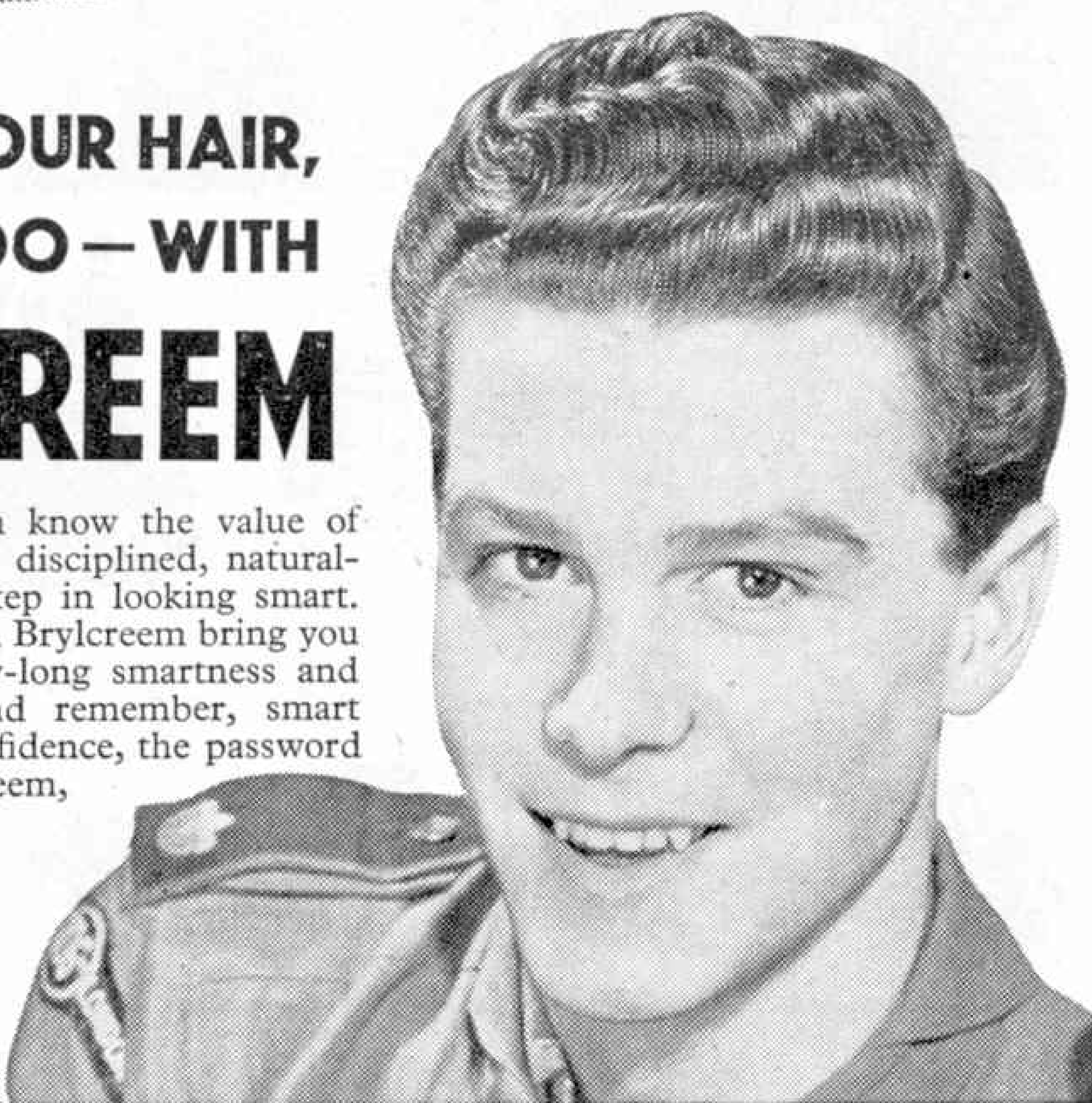
Standard
"Vanguard" Saloon
No. 40e
2/11

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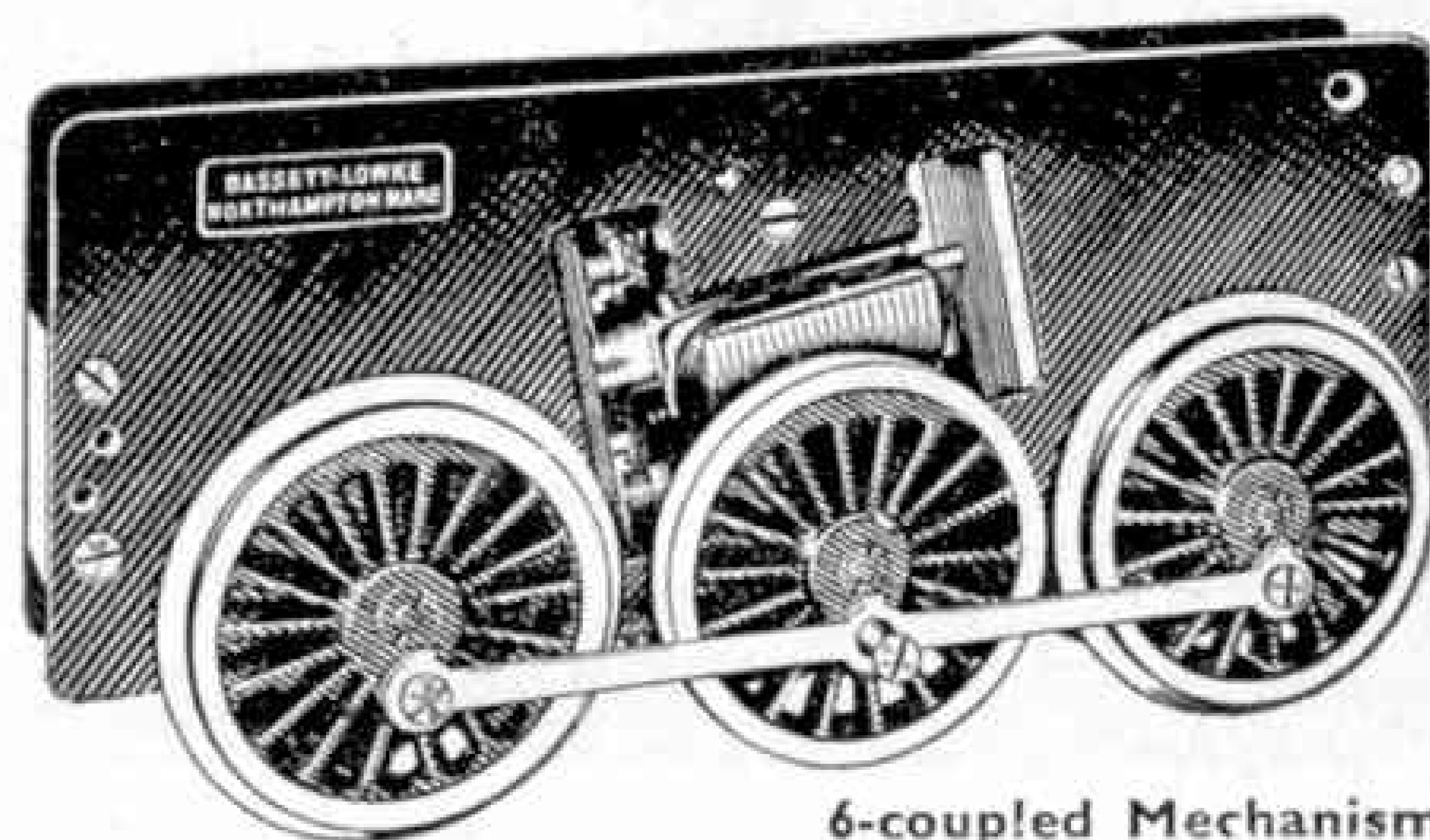


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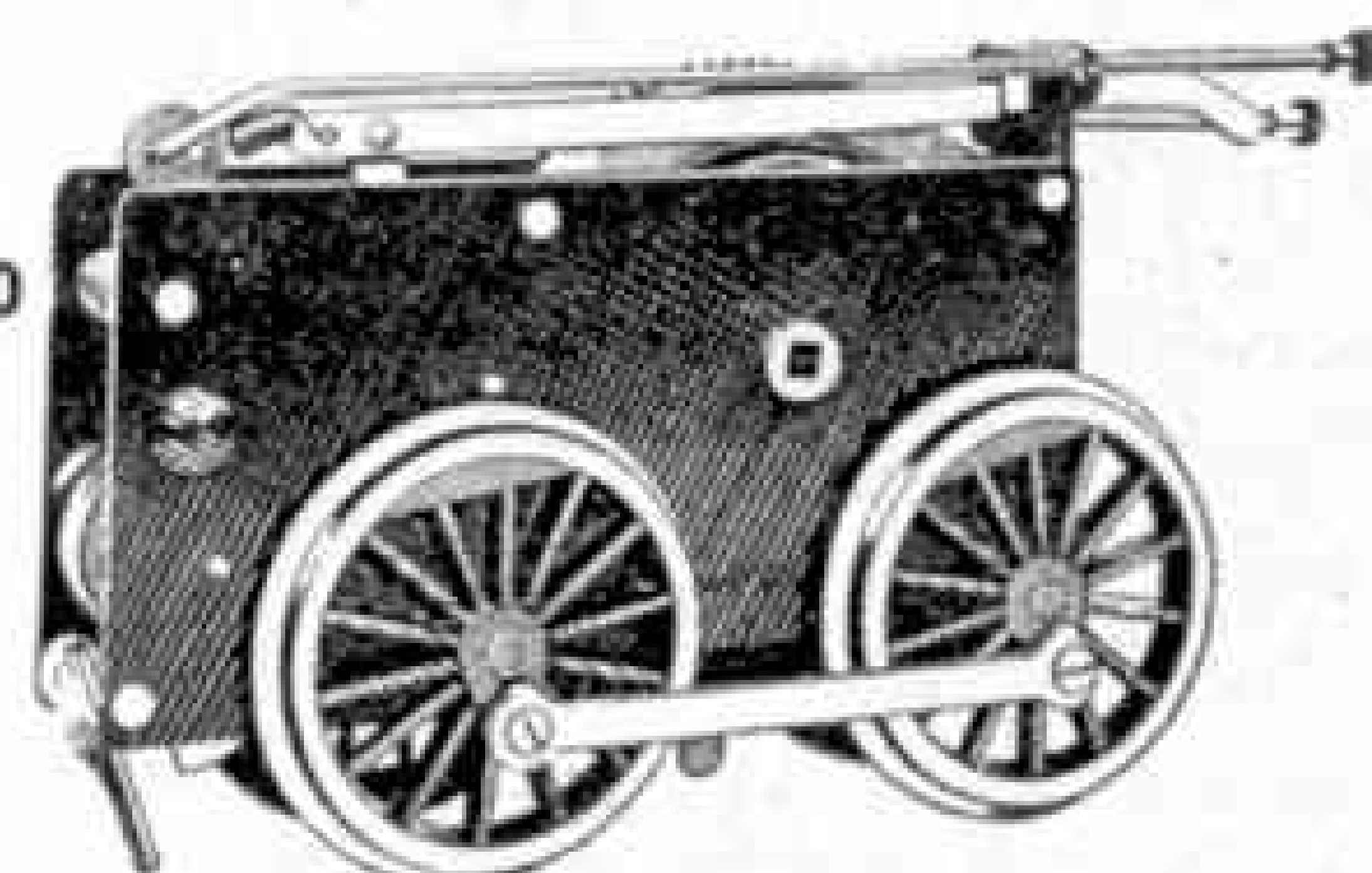
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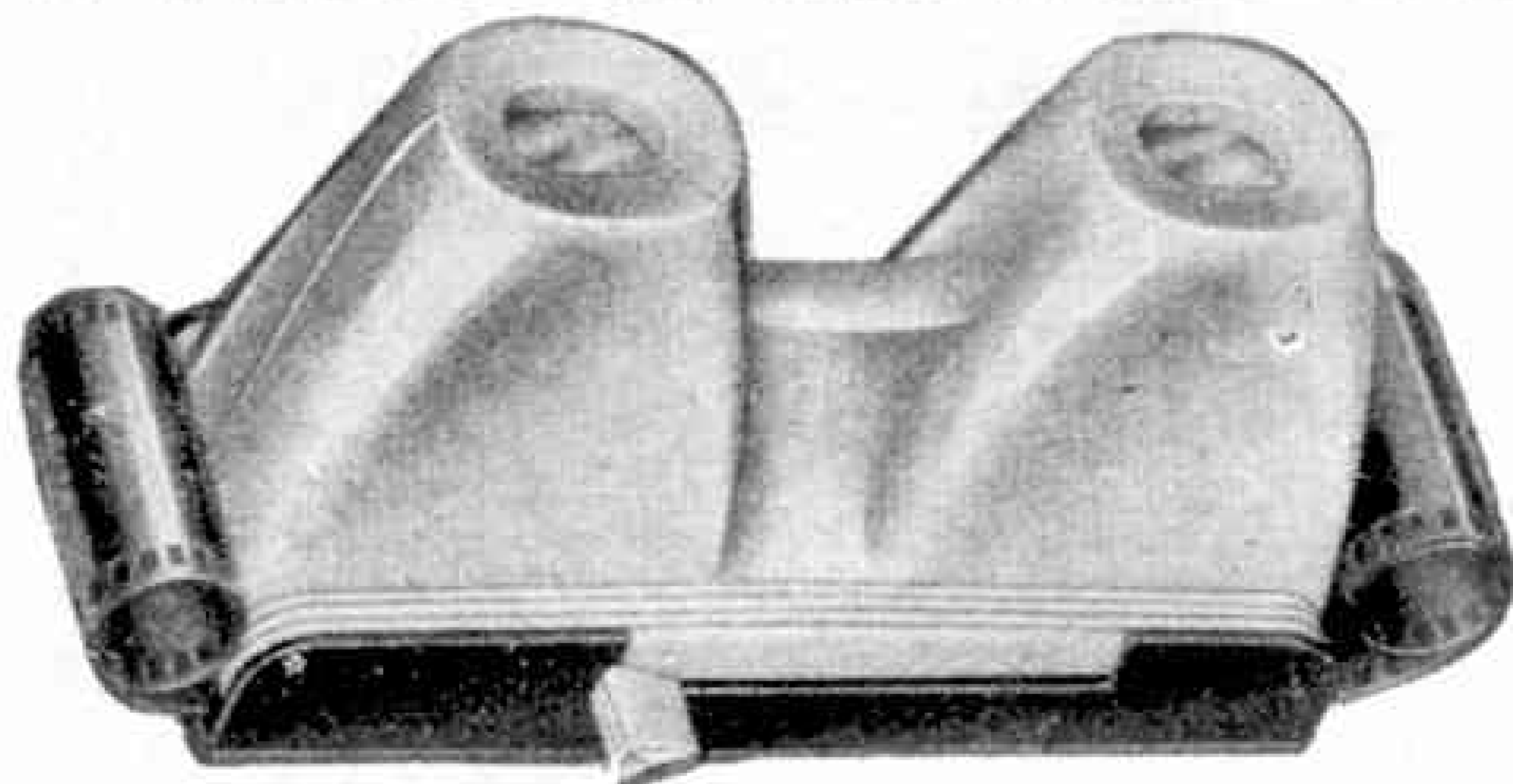
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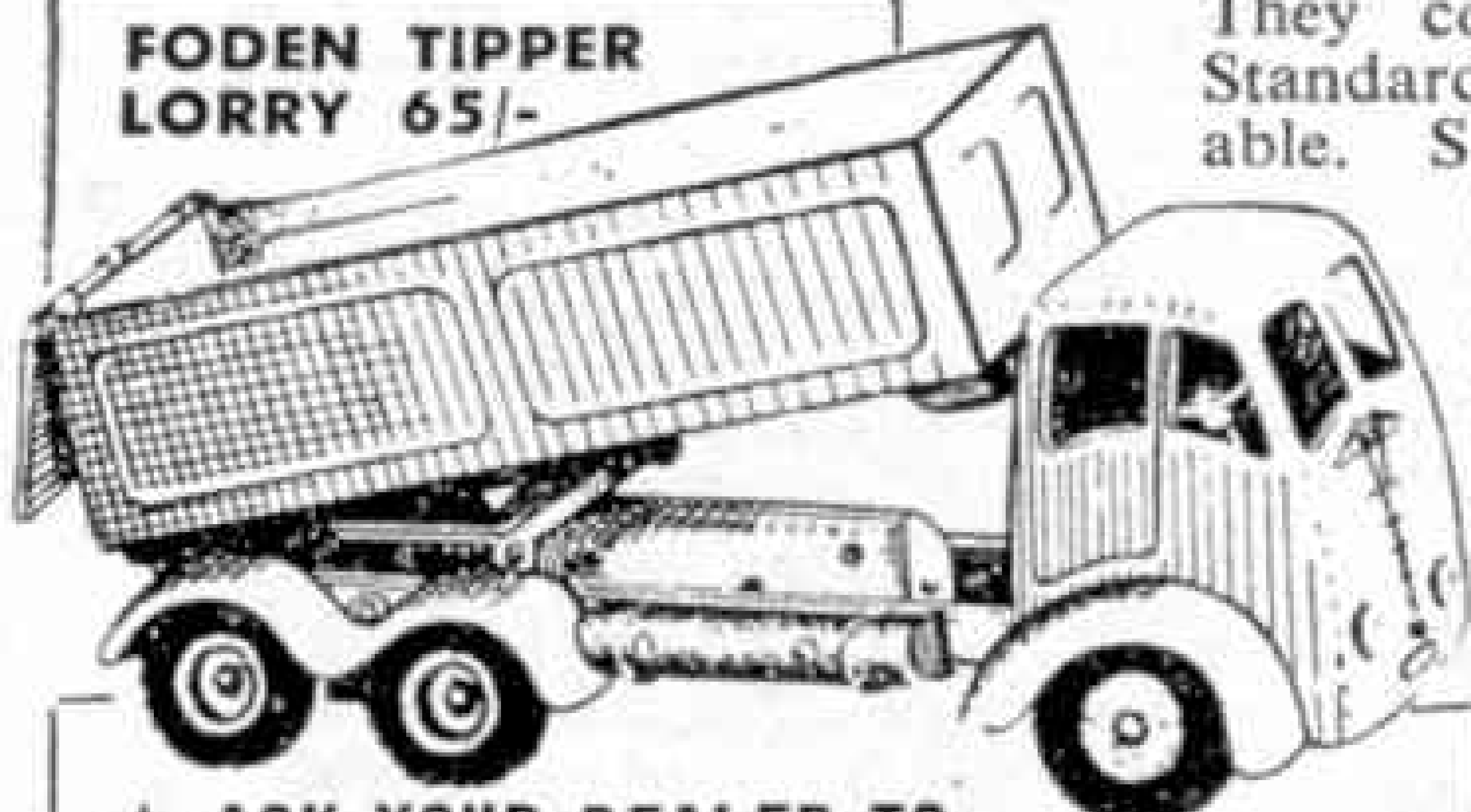
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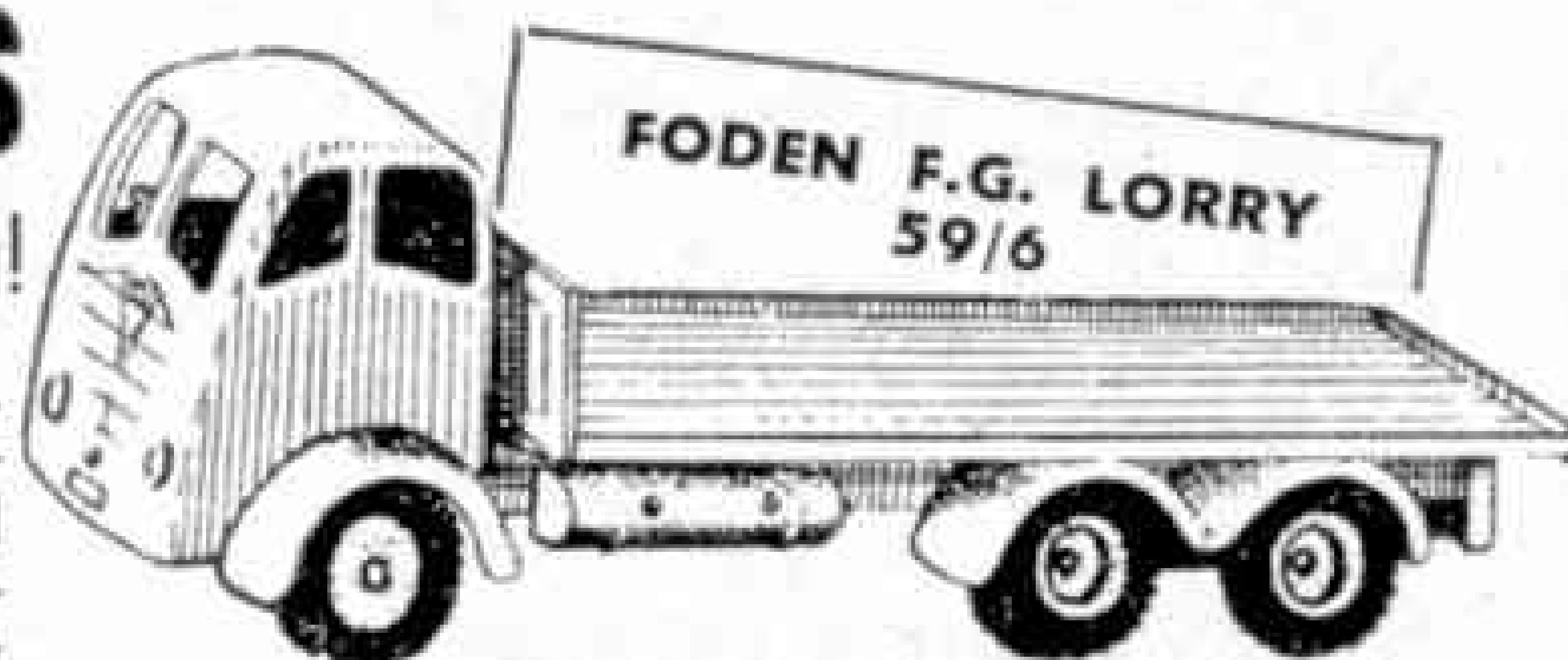
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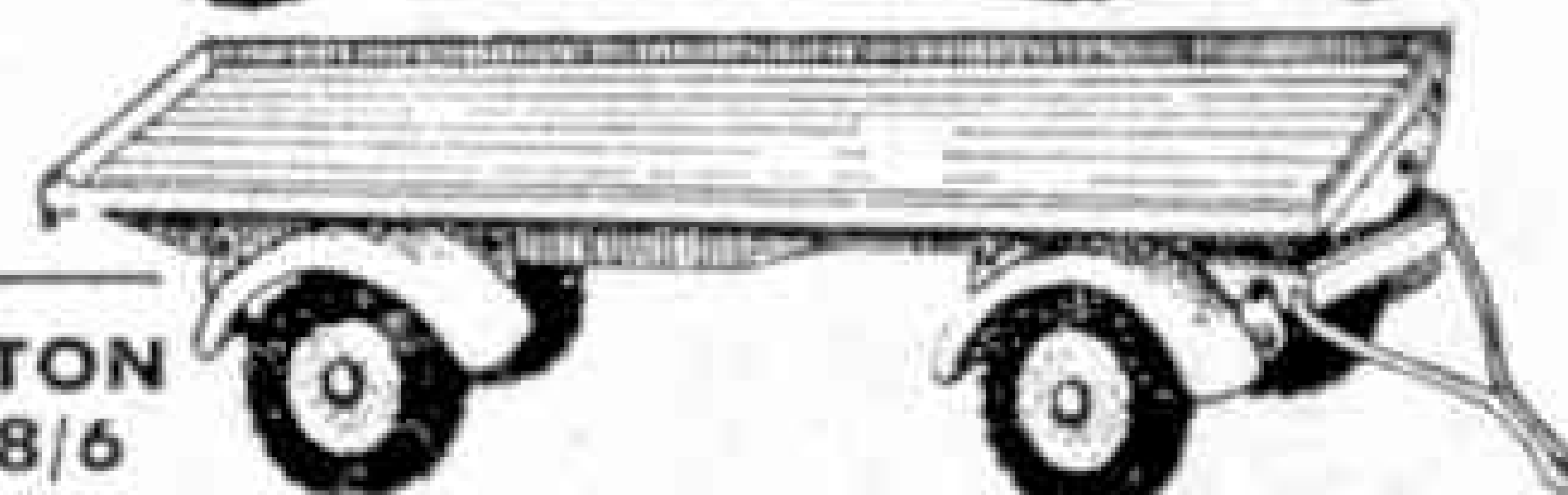


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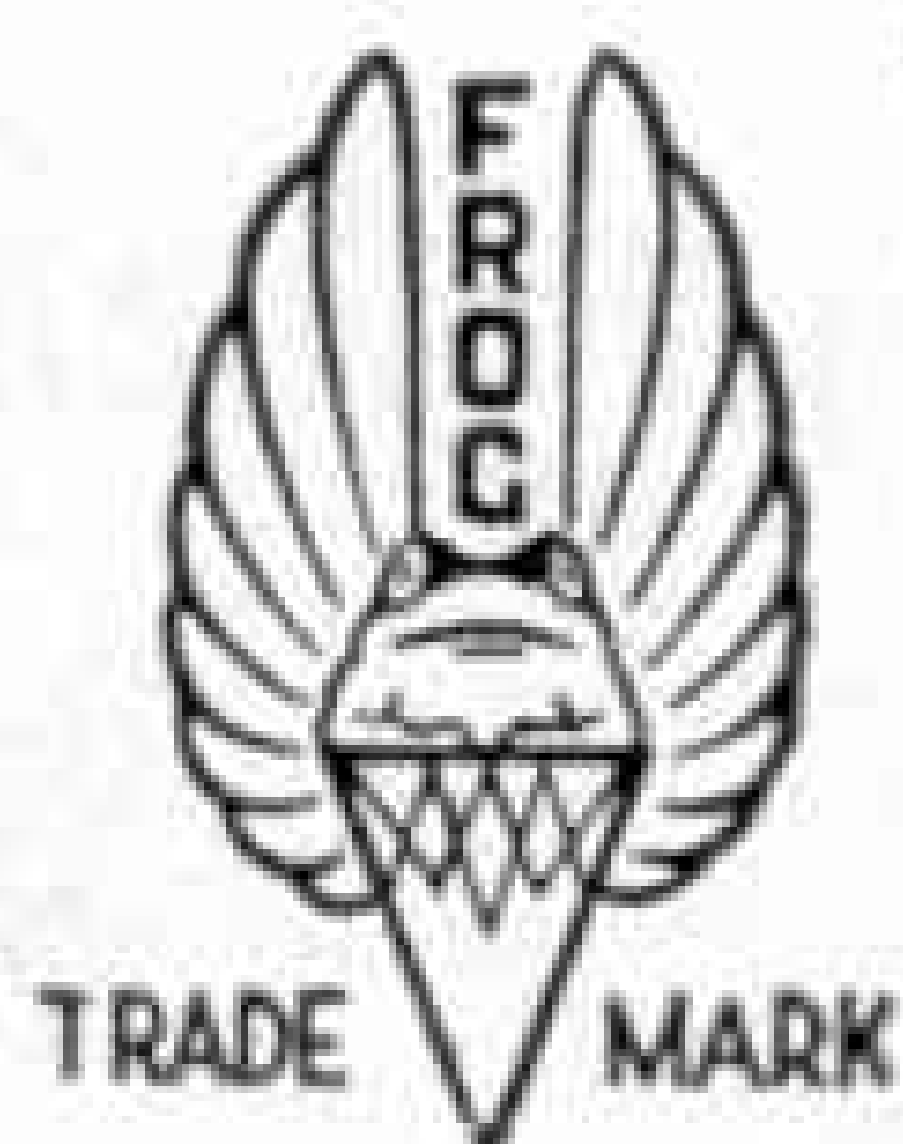


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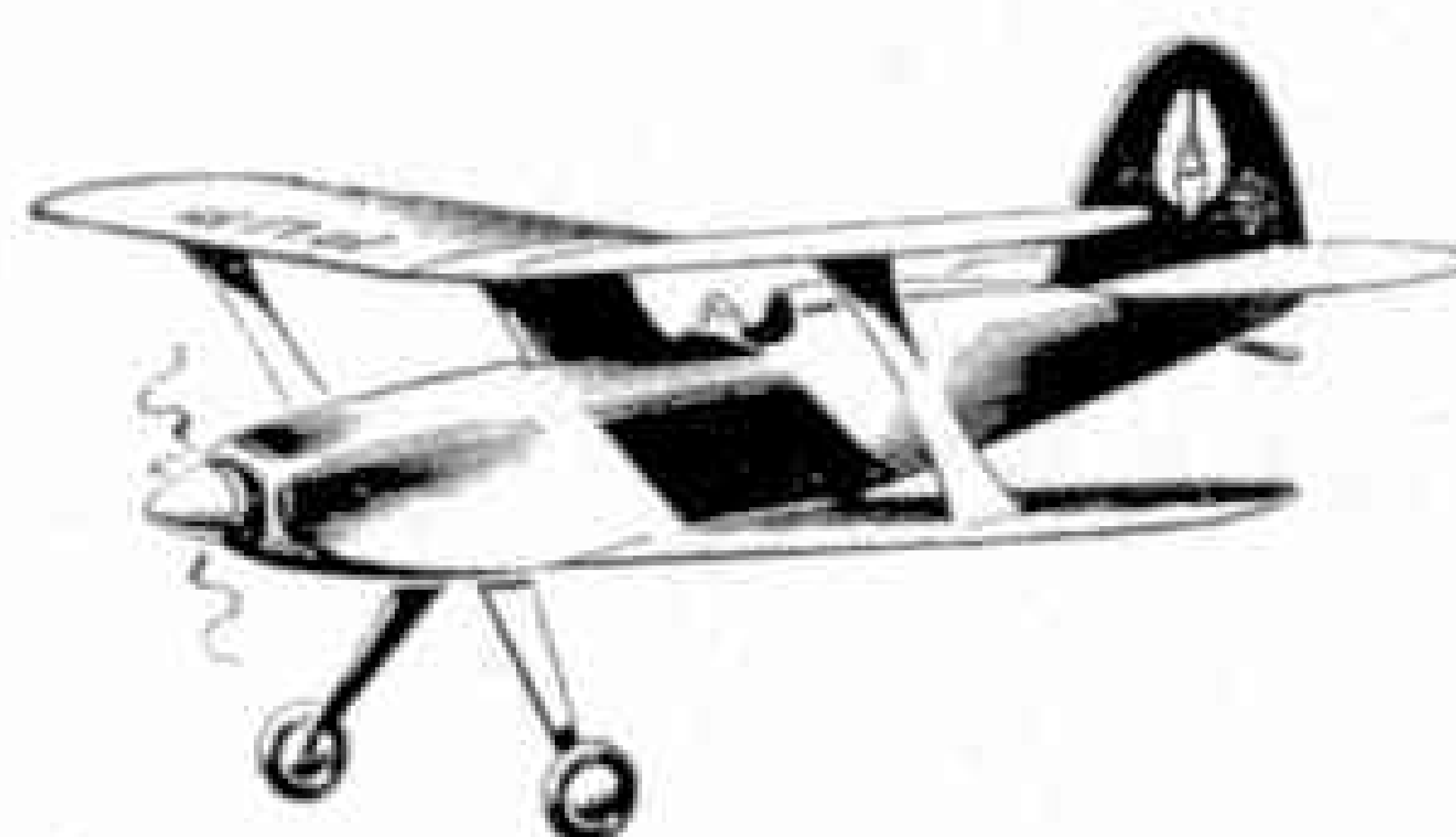
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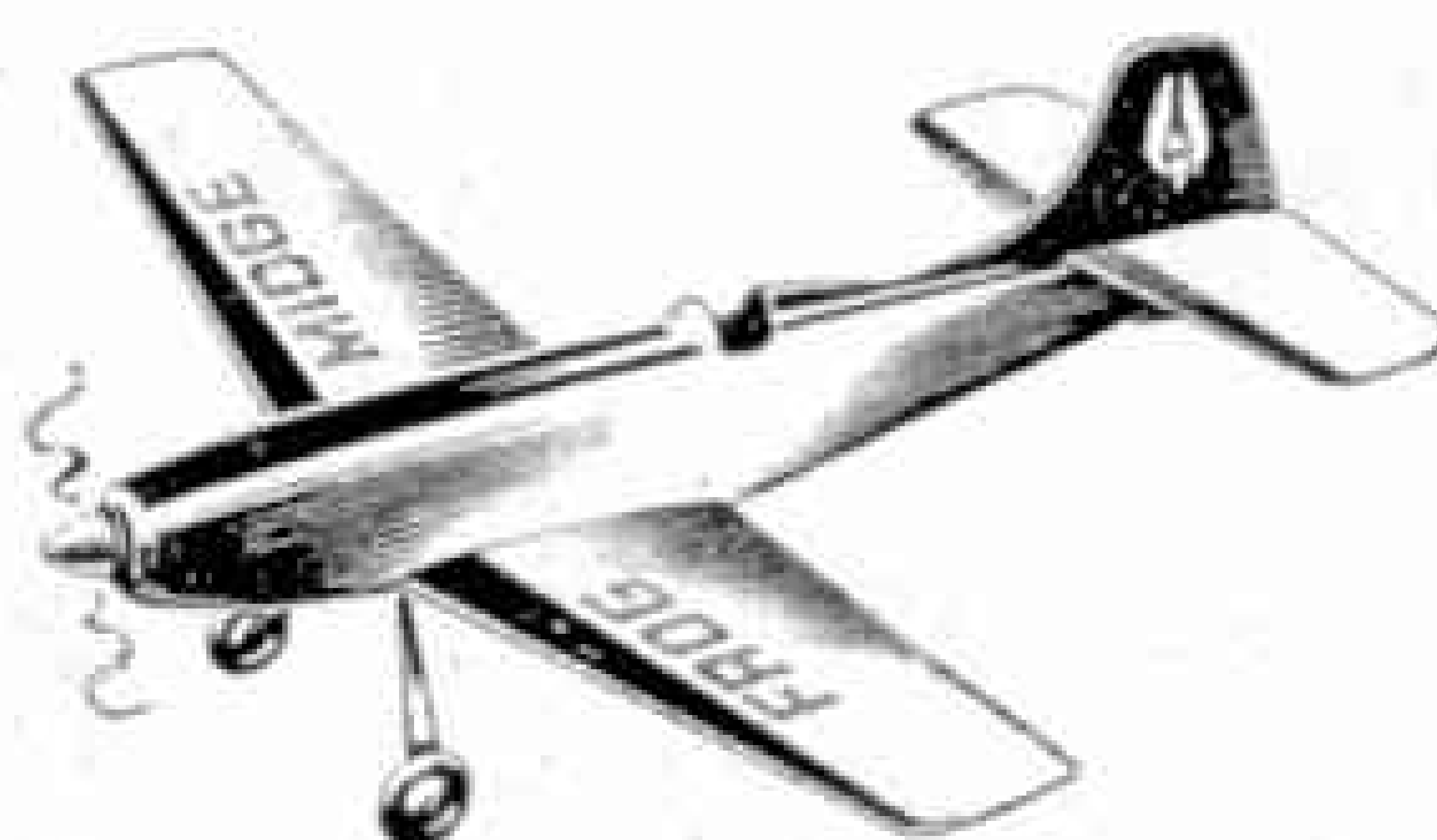
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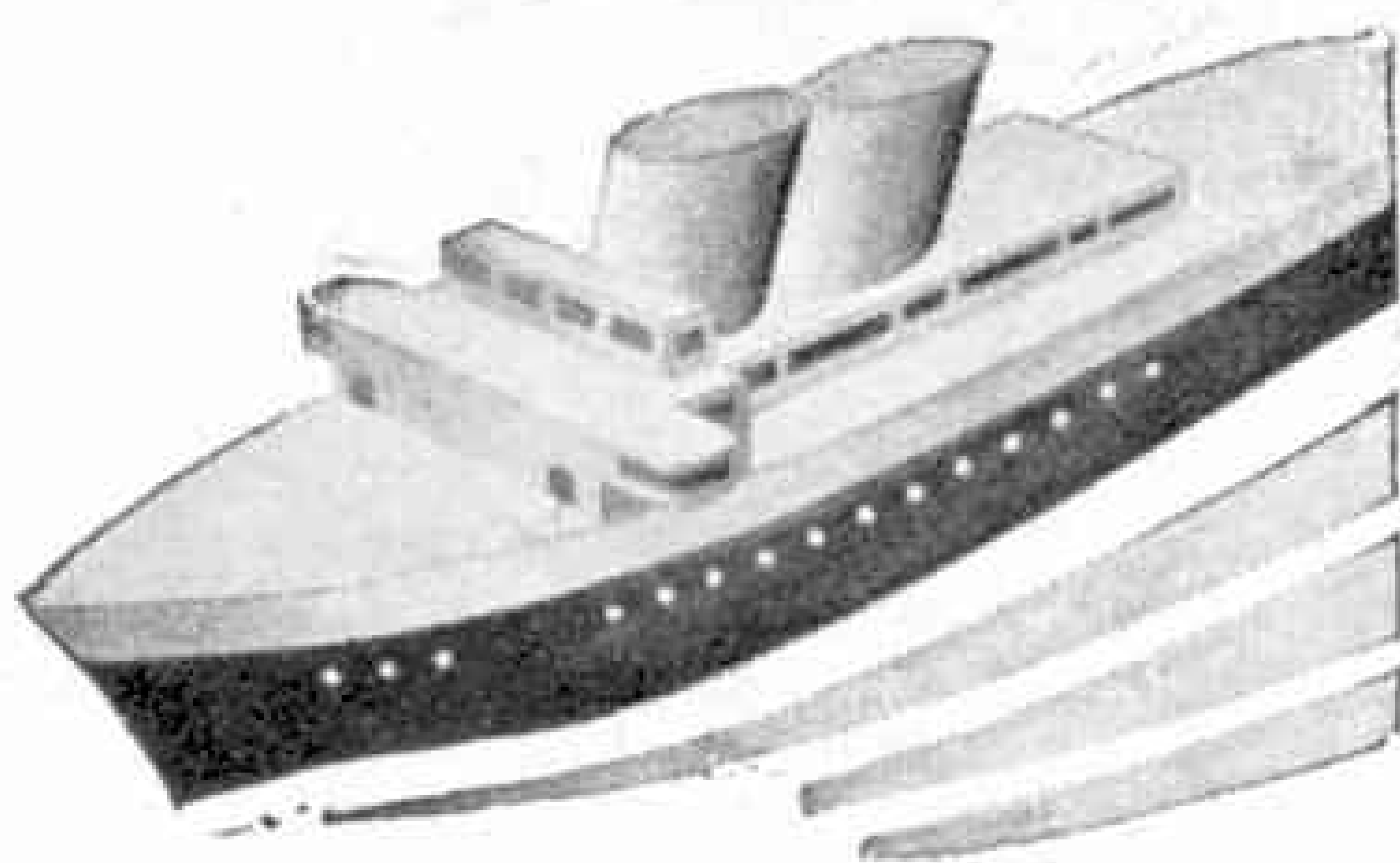
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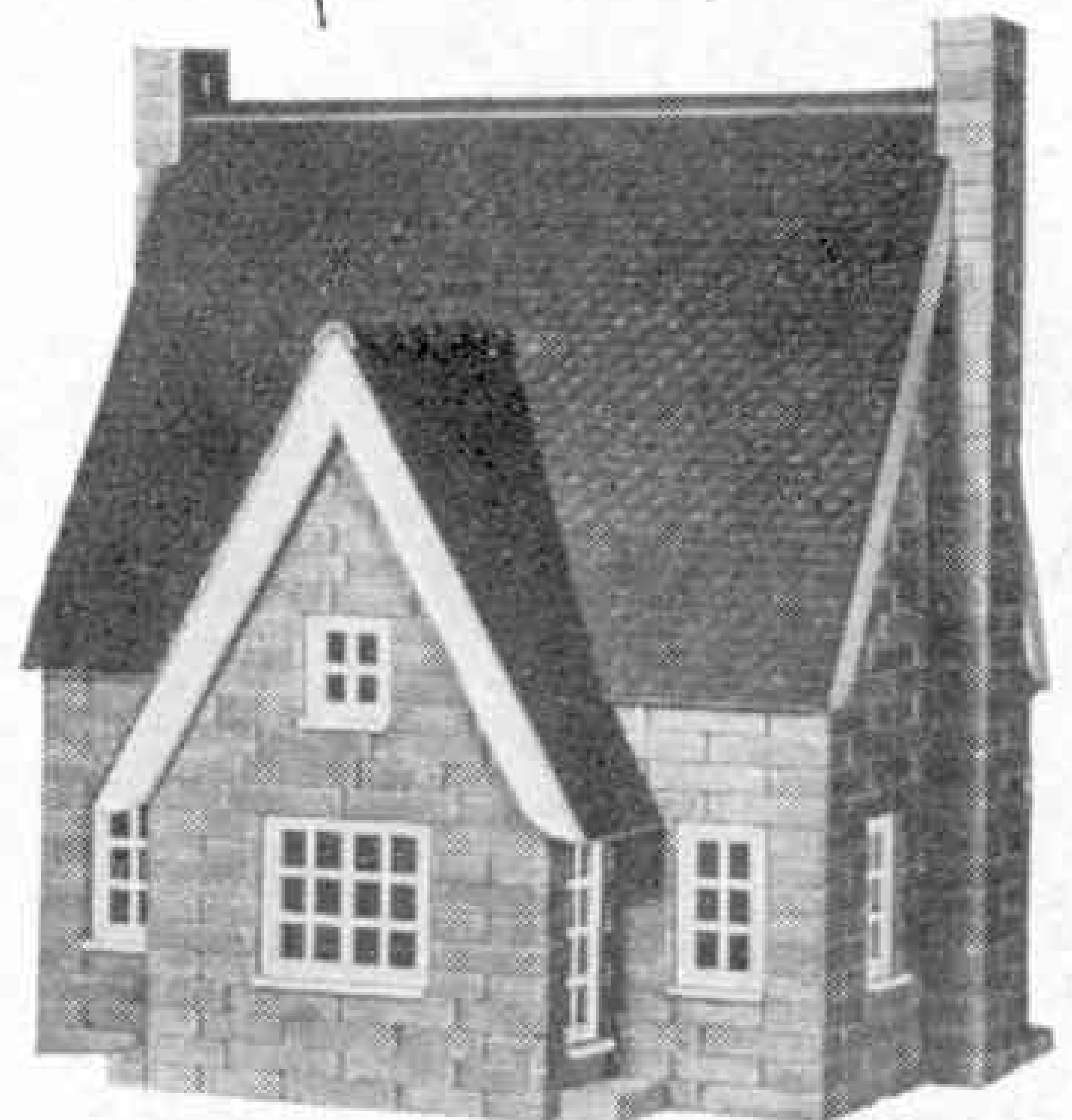
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for further particulars.

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Next Month: THE LORD MAYOR'S SHOW. By W. H. Owens

MECCANO

MAGAZINE

Editorial Office:
Binns Road
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Vol. XXXVII
No. 10
October 1952

We All Have Good Ideas!

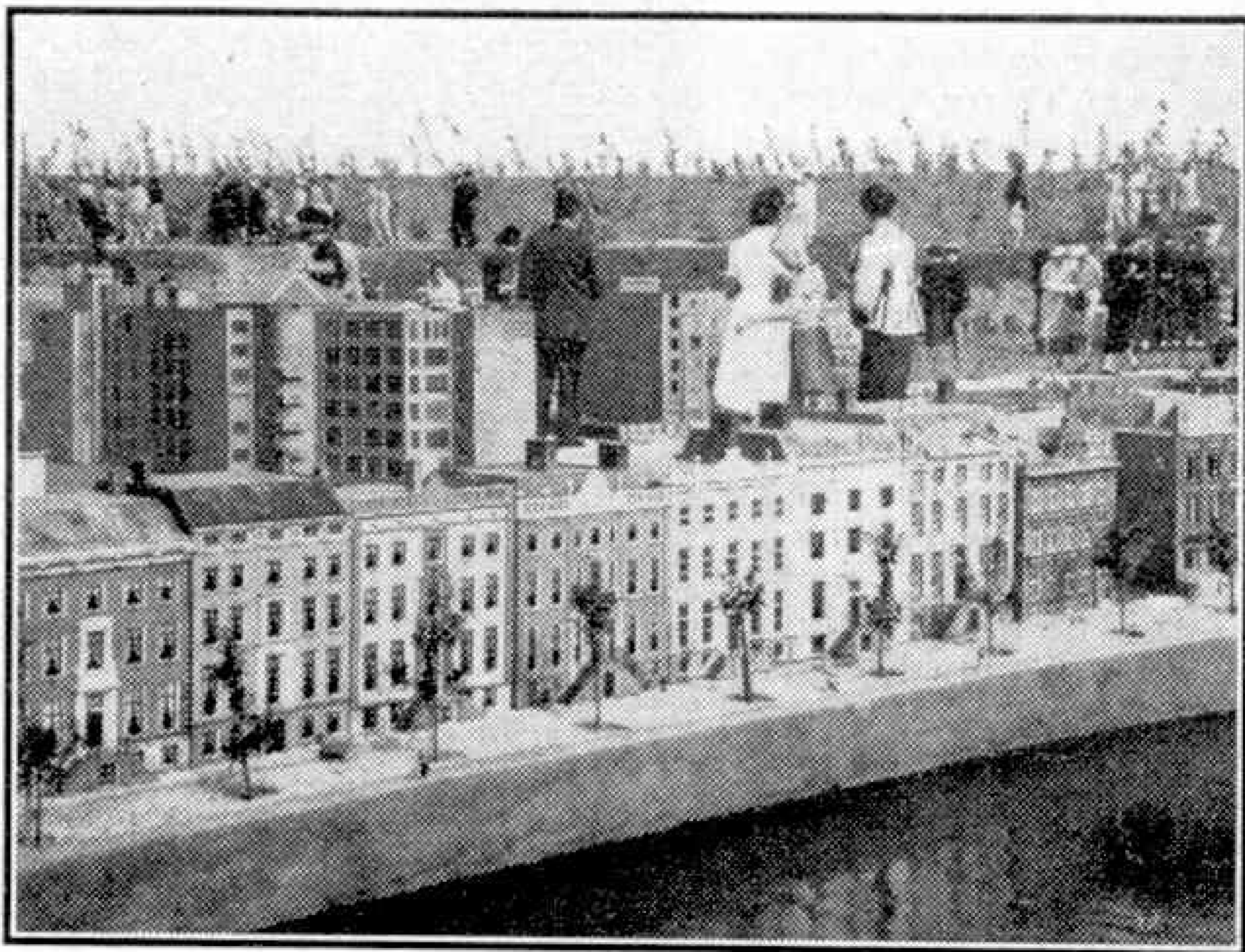
Here is the first of the larger issues that I promised you in August. Last month saw the coming of better paper, which must have made the Magazine easier for you to read as well as more pleasing to look at. Next month's issue will be as large as this one, and then will come our specially enlarged Christmas issue, full of articles and features in wide variety and with a seasonable air about it.

The appearance of the December *M.M.* will be a great event in itself, and it will also be the beginning of a further step forward, as in the New Year I hope to produce regularly issues with more pages than the one you are now reading. This will allow more opportunity for giving you what you want, whether your chief interest is in model-building, in Hornby or Hornby-Dublo Trains or in general articles of all kinds. There will indeed be more for everybody, and we shall have gone a long way towards the bigger and better Magazine that you so well deserve.

I say that because reaching this stage will not be the end of my efforts, and there are many ways in which you too can help to improve the Magazine. One is by writing to me regularly to give me your ideas for making it better than ever. Don't tell me you haven't any! I have not yet met the reader who is not full of

suggestions and I shall look forward to hearing from practically all of you.

Another way is to remember that the more readers there are, the better the Magazine can be made. So tell all your



Stately old mansions of Amsterdam seem here to be reflected in the waters of a canal, but as the figures behind them show, the mansions are really small scale reproductions. They are part of Madurodam, Holland's miniature city, which will be described and illustrated in next month's "M.M."

friends how good it is, not only as interesting reading matter for the moment, but also as a store of information that will be of use for many years to come. Your friends can find this out for themselves if you let me have their names and addresses. If you do this I will send them copies of recent issues to read.

The Editor

A Fascinating Hobby

Random Thoughts of a Railway Photographer

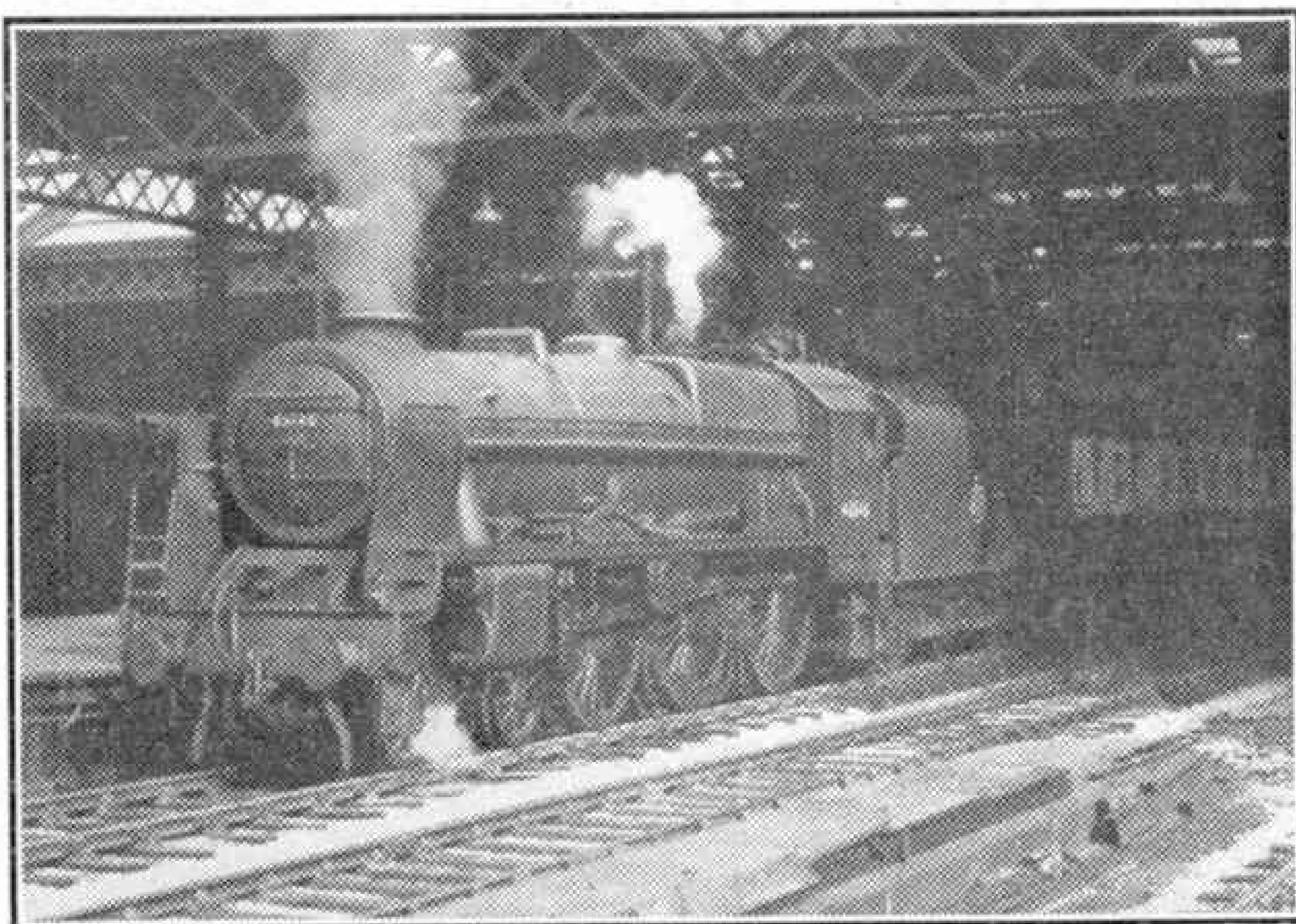
By the Ven. Eric Treacy, M.B.E.

THE standard of Railway Photography has developed enormously during the post-war years. Twenty-five years ago no more than a dozen names figured regularly under the illustrations appearing in the well-known railway journals; today, the number of those practising with considerable skill the none too easy art of photographing trains is legion. Consequently, competition for publication is much keener, and many of the great men of the past are being ousted from their pre-eminence.

Another new factor in the situation is the greatly increased consumption of railway publications. Admittedly this means that there is a larger market for railway photographs, but it also means that the consumers' standards are much higher and they are better informed than once they were. Those who practise train photography must realise that it is not enough simply to portray a train from the hackneyed threequarter head-on position. The beginner should set out to find original view points, and should remember that the railway does not consist only of locomotives, but that it is a scene rich in variety, presenting him with endless photographic opportunities.

During the twenty years in which I have been addicted to this hobby, I have had many interesting and amusing experiences. Photographically, I have suffered the disappointments of those who play with cameras in that I have sometimes taken my camera, but left my lens at home; or set out on glorious days with high hopes, only to find a depression centred over the small area in which I proposed to work. I remember one short holiday I spent in the Beattock area, in the course of which I had but one fine

day, a day in which the conditions for photography were ideal. But the hours passed and no trains came—until the sun disappeared behind the hills, and then, 90 minutes late, the *Royal Scot* puffed up the hill in charge of three tank engines from the Beattock Shed, having left its disabled Pacific at Lockerbie. For the rest of the week, everything on the railway



The three illustrations on these pages are selected from the many photographs taken by the author of this article, a famous railway photographer. The one reproduced above shows L.M.R. 4-6-0 No. 46146 The Rifle Brigade ready to leave Euston with the 5.20 p.m. for Holyhead.

Our cover this month also is based on a photograph by the author. On it the up Merseyside Express is seen climbing out of Lime Street Station, Liverpool, headed by No. 46124 London Scottish.

went well, but the weather did not.

There is no doubt that the fascination of any hobby lies in the uncertainty of success, whether it be shooting, fishing, climbing, or playing cricket or football. The certainty of success would induce a monotony that would take all stimulation and fascination from the pursuit. This is most certainly true of photography—in whatever application.

The Editor suggested that I might relate some of the adventures that I have experienced during my photographic expeditions. Adventure is a dramatic word to use for any of my experiences, and I cannot claim that anything has happened to me that would make good copy for a newspaper. I certainly have

experienced some thrills, but for the most part they have been of the sort that might not have appealed as such to anyone but me. For instance, I can remember as vividly as if it were yesterday, a certain stormy day ten years ago, on Shap Fell, when a violent hail storm swept across the hills from the west. In the distance the 10 o'clock from Euston had been stopped at the home signal near Shap Wells. At the precise moment that the mighty Pacific started to get its heavy train moving, the sun broke through, bathing the whole scene in that beautiful liquid light which so often follows rain in the early Spring. The engine passed me, slipping violently on the wet rails, at walking pace. I still think the resulting photograph one of the best I have ever taken. I don't think the driver was as aware of the artistic possibilities of the scene as I was!

Then I recall a run on the footplate of the evening train from Carlisle to Leeds, through some of the wildest country in England. The engine was a Jubilee 4-6-0 in beautiful condition. As we left Carlisle the sun was dropping towards the western horizon. Soon the outline of the Lakeland mountains came into view across the peaceful Eden Valley; above them the evening clouds were banking, touched with the rich gold of the sun, the hills dark

and mysterious and appearing unexpectedly near in the clear light. In the cab the fireman fed his fire "little and often," and above the cab the exhaust streamed backwards over the train, lit every now and then with the reflection of the fire;



A Kent Coast express leaving Victoria in charge of No. 34059 Hawkinge, of the Battle of Britain light Pacific class.

behind us the train twisted and turned in the dusk like a luminous caterpillar; and to the east the Pennine spine of England disappeared to the north where it joined its Scottish head.

For an orchestral accompaniment to this beautiful scene, there was the satisfying roar of the three-cylinder locomotive as it lifted its train up an ever steepening incline. Beyond Appleby the hills closed in upon the train, the sky grew darker, with stars twinkling above us, and the

outlook became more terrifying, with Wild Boar Fell towering over us on one side, and Mallerstang Common, dark and mysterious, on the other. Here and there, lights shone through the windows of some of the loneliest farms in England.

Thus we came to Ais Gill, the summit of our climb, and in the dark threw ourselves down from Blea Moor to Settle. It would need a painter rather than a photographer to capture the enchantment of that

(Continued on page 480)



Streamlined Pacific No. 60029 Woodcock "getting hold of 'em" near Copley Hill on the 5.15 p.m. Leeds to King's Cross.

Himalayan Airlift

By Capt. Peter Massey

The first account of an airlift to a remote corner of Kashmir, where the mountains rise in leaping cliffs to heights of 25,000 to 28,000 ft. and the natives offer jeeps hay to eat and milk to drink. The author of this story was one of two British pilots flying on this dangerous mountain service.

THREE-QUARTERS of a million people of a vast area in the North-Western Himalayas rely for their supplies on the air freighters of what has become known as the Gilgit Airlift. Dakotas, the aircraft of this airlift, make from two to ten flights a day from Peshawar, their base, to Gilgit and Skardu, in Kashmir.

Flying in this part of the world offers considerably greater problems than those faced by the pilots who flew over the Hump from India into China during the war. The mountains rear up to more than 25,000 ft. Instrument flying is the exception, for one must rely on sight to follow the twisting valleys, and there have been times when I had to scrape ice from the inside of the windshield with a razor blade to see where I was going.

We normally fly at 15,000 ft. But it is not uncommon for the pilots of the Gilgit Airlift to go up to 20,000 ft., and once I had to take my Dakota up to 22,000,

the route from Peshawar to Skardu one can see eight of the world's ten highest mountains, given good visibility.

Among these towering white buttresses are Nanga Parbat, with a height of 26,660 ft., Raka Koshi, 25,000 ft., Haramosh, 24,500 ft., and K2, 28,000 ft., to mention only a few.

The route indeed lies across territory almost beyond penetration on foot, between peaks yet to be named, into an area of rearing rock and ice larger than that of Europe. Its two main inhabited localities, Gilgit and Skardu, with a population of about 2,500 each, are oases in a wilderness of incredible grandeur.

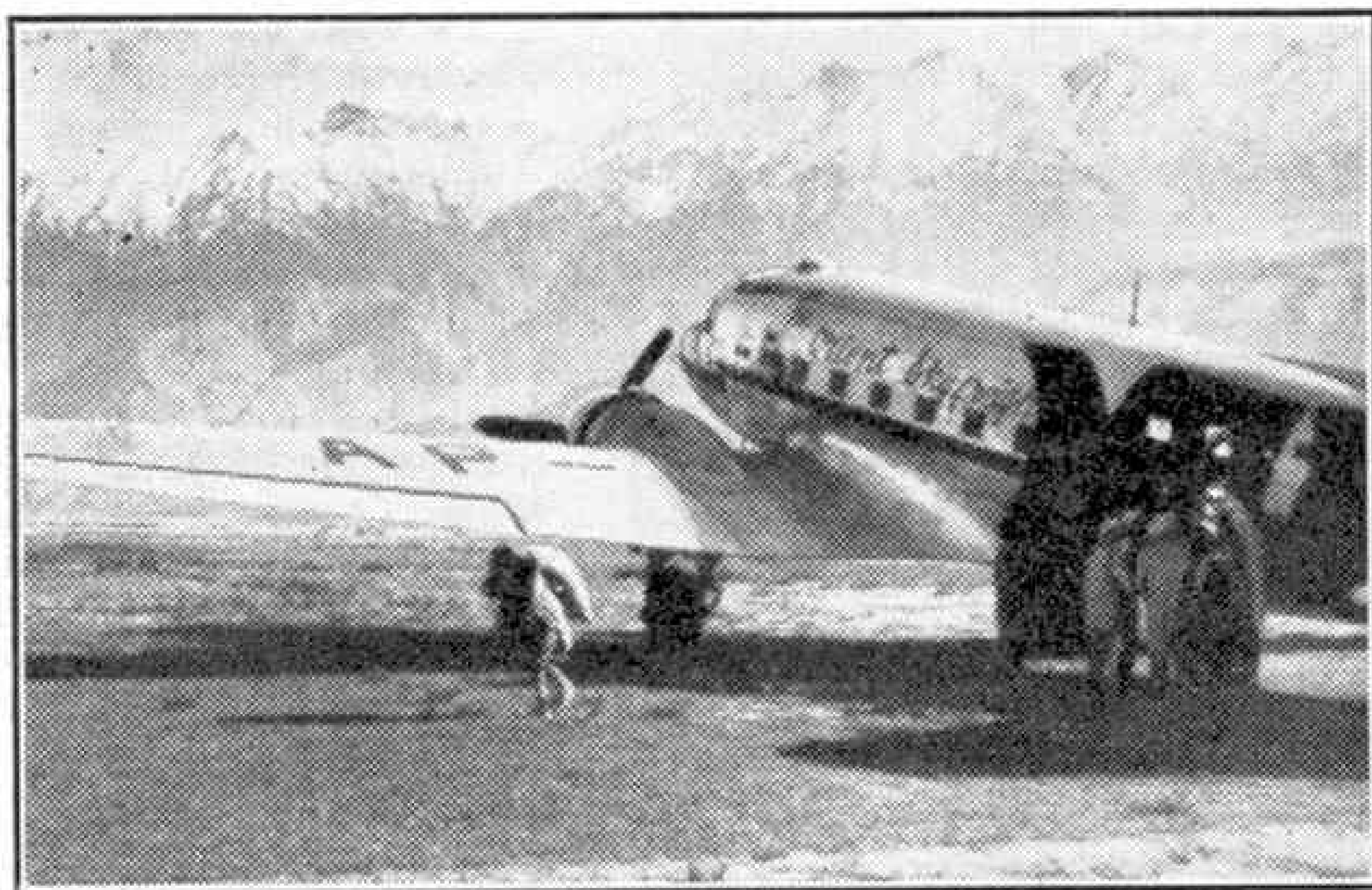
A road, if you could call it such, runs from the plains of the North-West Frontier along the Kunar Valley, over the 13,900 ft. Babusar Pass into the Indus Valley at Chilas. It was originally a camel track, but when the Kashmir Incident arose Pakistan decided to enlarge it for wheeled vehicles. But it remains little more than a track, just wide enough for a jeep and flanked by 2,000 ft. precipices. What happens when a caravan of camels meets a jeep convoy is a matter for conjecture, with the man with the loudest voice probably

winning right-of-way.

There is little possibility of this road being developed to the point where it becomes a major highway, for it is open only in the late summer and early autumn, for a maximum of only three-and-a-half



Captain Peter Massey, a pilot of the Gilgit airlift, which makes from two to ten flights a day among some of the highest mountains in the world. Illustrations: Polar Photos.



The airstrip at Gilgit, with a Dakota being unloaded.

thanks to the unexpected "blizzard weather," and this without the benefit of oxygen. However, oxygen apparatus will be available for passengers and crew on this run in the not too distant future.

Flying here is unique. At one point on

months. In the past Gilgit and Skardu received supplies along the track from India and by way of another from the Chinese province of Sinkiang. But the former route has been closed since the Kashmir Incident, and the latter, leading into Russian-controlled territory, was closed after the Cease Fire. Thus the 750,000 people of the Skardu and Gilgit area rely almost entirely on air freighters for their supplies.

This part of Kashmir is a key-point between India, Pakistan, Afghanistan, Russia and Red China. Gilgit is at its crossroads, for through it passes every track serving an area of some 50,000 square miles, and with the advent of the

particularly so in view of the rarefied atmosphere.

Construction of the strip at Gilgit was somewhat involved, for the terrain offered only one direction for the runway, and, unfortunately, the length of the strip was dictated at one end by a river and at the other by a mosque, the removal of which is forbidden by the local religious laws.

There is no question of airfield equipment. There are no hangars and no ground maintenance facilities. You cannot refuel at either Gilgit or Skardu. Fuel is calculated on a return flight basis, with a handsome margin because of the extraordinary and sometimes devastating weather conditions.

In the course of two hours the weather can change from clear to zero visibility, with blizzard, icing and violent turbulence. Yet in two-and-a-half years we have not lost one plane or passenger. We have delivered some 2,000 passengers and 3,000 tons of freight to Skardu and Gilgit, for local needs and distribution to outlying communities by backpacking coolies, yak, mules and donkeys.

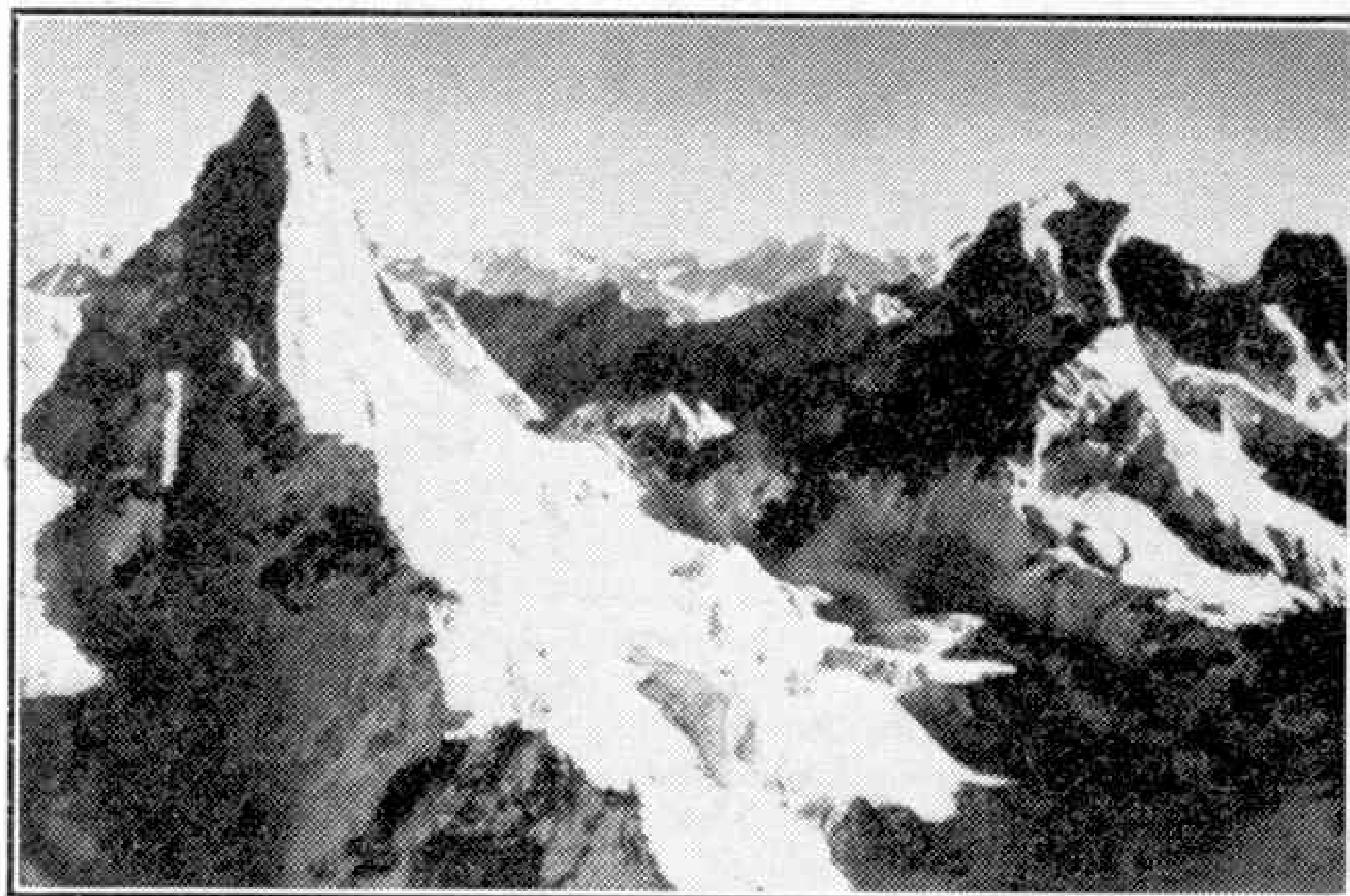
Freight and passengers are, to speak in minimums, varied and unusual.

Up to the time of the airlift people in this

part of Kashmir were completely untouched by civilisation. They looked with amazement at the first aircraft to touch down, and when subsequently we flew in a jeep they produced a load of hay for it to eat. Asked for water with which to top-up the tank, they produced milk, it being their belief that the strange new animal before them wanted something to drink.

But it was not long before they appreciated the practical value of jeeps—and of air freighters. Very soon our passengers included natives bound for Mecca on the Haj Pilgrimage, troops on leave—Pakistan maintains small garrisons at Gilgit and Skardu—yak drivers, priests and sometimes whole families with an incredible assortment of bundles.

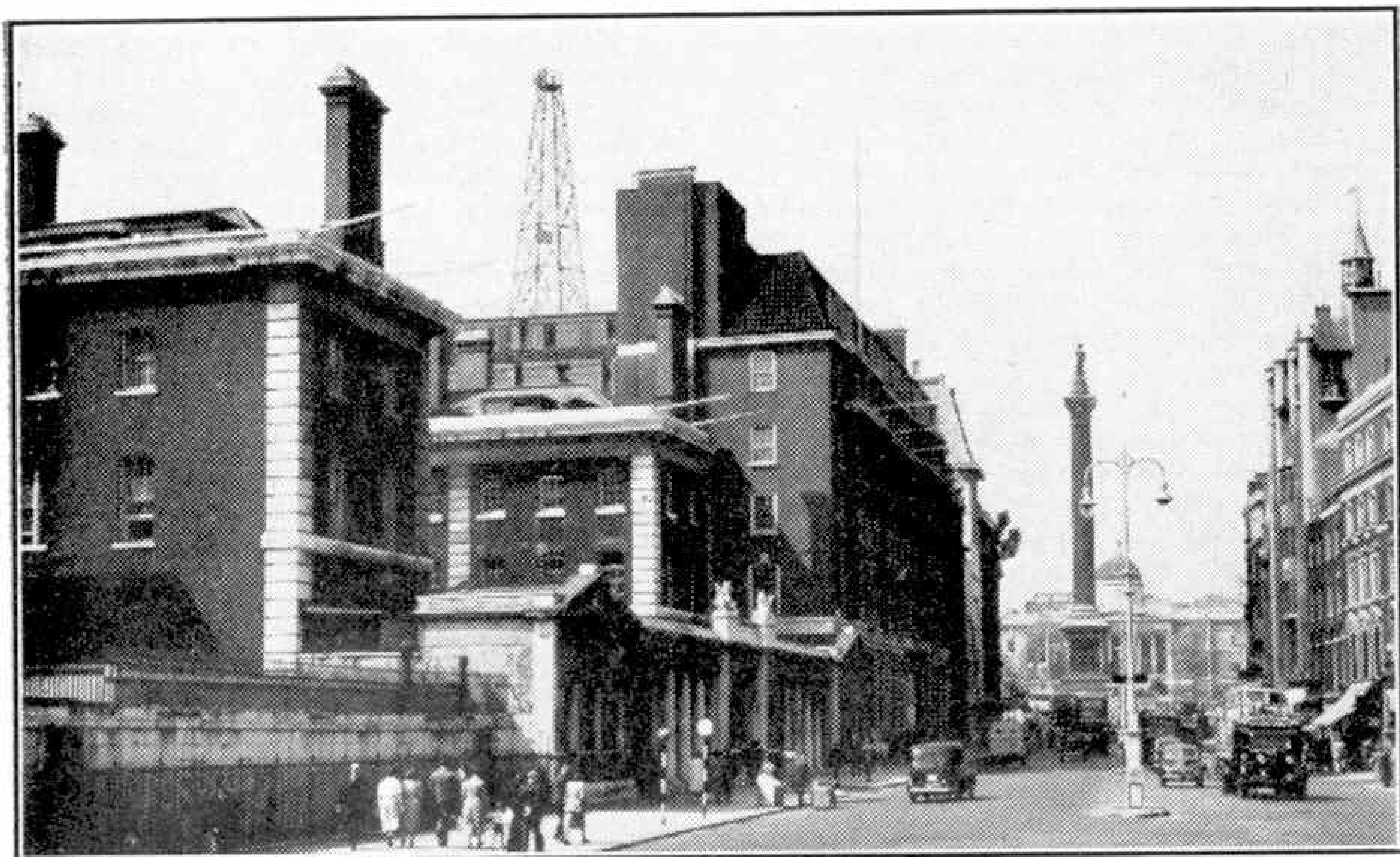
Freight included sugar, salt, atta or flour, dahl or split peas, (Continued on page 480)



Typical Himalayan scenery on a short cut followed in special weather conditions. It is on the run to Skardu.

Kashmir Incident Pakistan decided to build airstrips at both Gilgit and Skardu.

The construction of the Skardu strip offered few technical difficulties; it only had to be cleared. But landing and take-off is not exactly simplified by the fact that the strip is 7,000 ft. up, and laid on a cemetery. The local people forbade the disturbing of their dead. However, they made no objection to laying an airstrip OVER the graves. Unhappily the surface has not always proved strong enough to hold a heavily-laden Dakota, and on one occasion the wheel of a Dakota flown by Capt. Tomkins broke through into a grave, and had to be hauled from its resting place by a jeep. Also the airstrip lies almost at the base of a 2,000 ft. precipice. Today it is some 1,600 yards long. But initially it was only 900 yards in length, which made for tricky landings,



Television in a Bank

By Frank Illingworth

A FIRM of private bankers in London, Messrs. Glyn, Mills and Co., have put to the test a new use for television. One of their offices is near Trafalgar Square, and its records department is at Osterley, ten miles away in Middlesex. Documents required at the bank's head office have to be sent up by hand, which at the best means a delay of an hour or so.

With this delay in mind it was suggested that a television transmitter should be installed at Osterley, so that television pictures of documents could be flashed on to a miniature receiving screen in the heart of the Bank's head office in London.

That was four years ago. The radio manufacturers, Messrs. Pye Ltd., Cambridge, were approached, and in due course work on this new idea in the world of television—and of banking—got into its stride. A private transmitter was built at Osterley, with the receiving side of the circuit installed in London, and the first experimental transmissions began.

Inevitably there were stumbling blocks. But one by one these were overcome, and towards the end of April of last year

further experiments finally proved that television could have an important place in the world of banking, and indeed in commerce generally.

A demonstration was staged in which an official of the bank telephoned to Osterley for a certain document to be televised to his office. A few minutes later a picture of the document in question appeared on the neat little screen on his desk.

The viewing screen is fitted with special shields, so that if necessary, for security, only one person can "look in" at a time. The document was a cheque, and by moving a knob the viewer could read the name of the payee or the date, or the signature. "If I am not

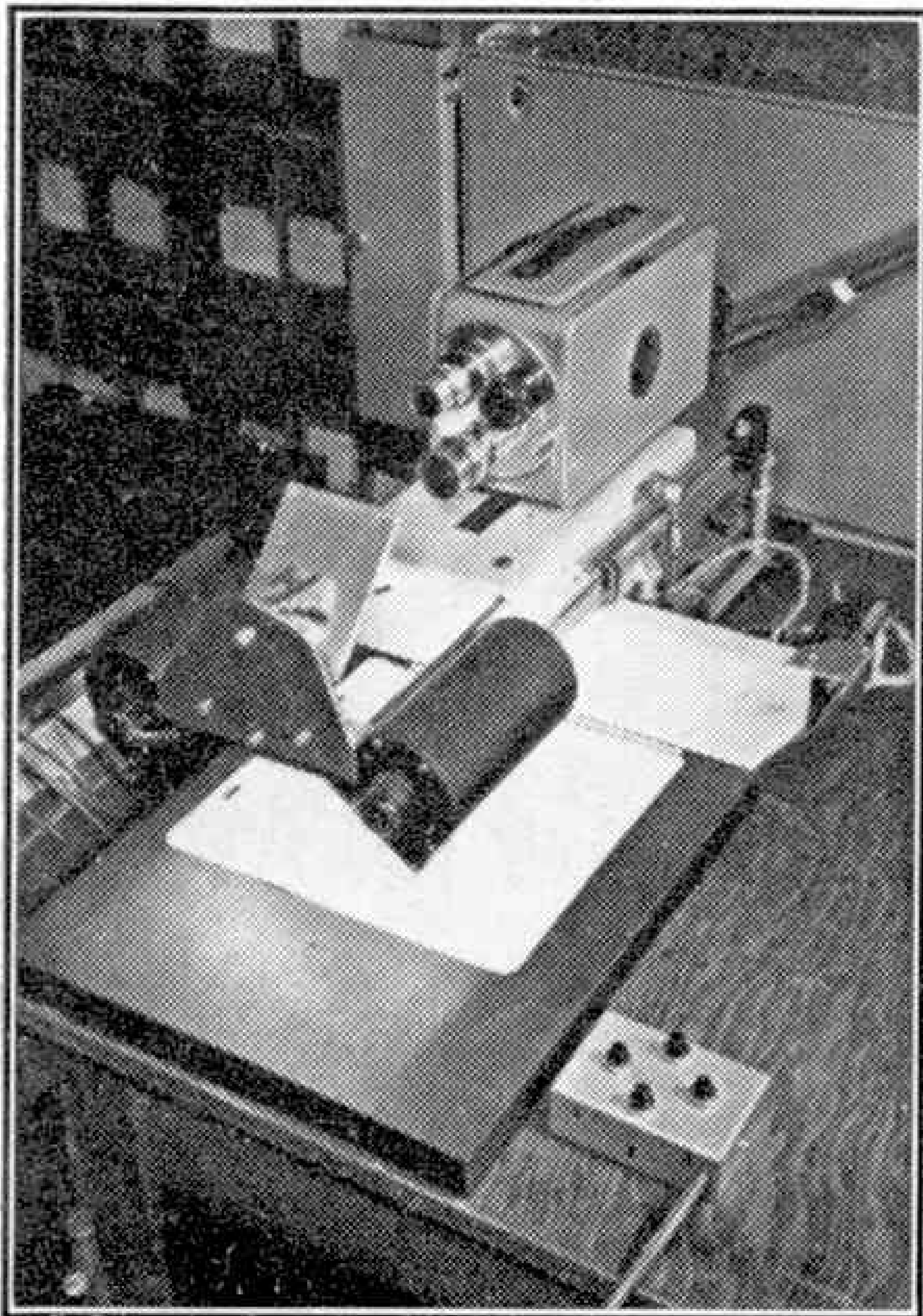
satisfied with the signature I can 'phone down to Osterley for the lens to be enlarged, which means the enlarging of the signature," he said.

He was asked if other people with television sets could "look in" on the Bank's circuit, and the answer was "No, not normally." The effective part of the beam from Osterley is very narrow, and it would therefore be extremely difficult

In the picture of Whitehall, looking towards Nelson's Column in Trafalgar Square, at the head of the page, the mast of the television system described in this article can be seen on the roof of the offices of Glyn, Mills & Co.

to intercept it. Anyhow, if this proved remotely possible it could be stopped pretty quickly—for example, by what is known as "scrambling."

It should be stressed that work in this



Here is the miniature television camera looking at a document in the records department at Osterley. Below the document is shown under examination at the Head Office as it appears on the screen of the receiver.

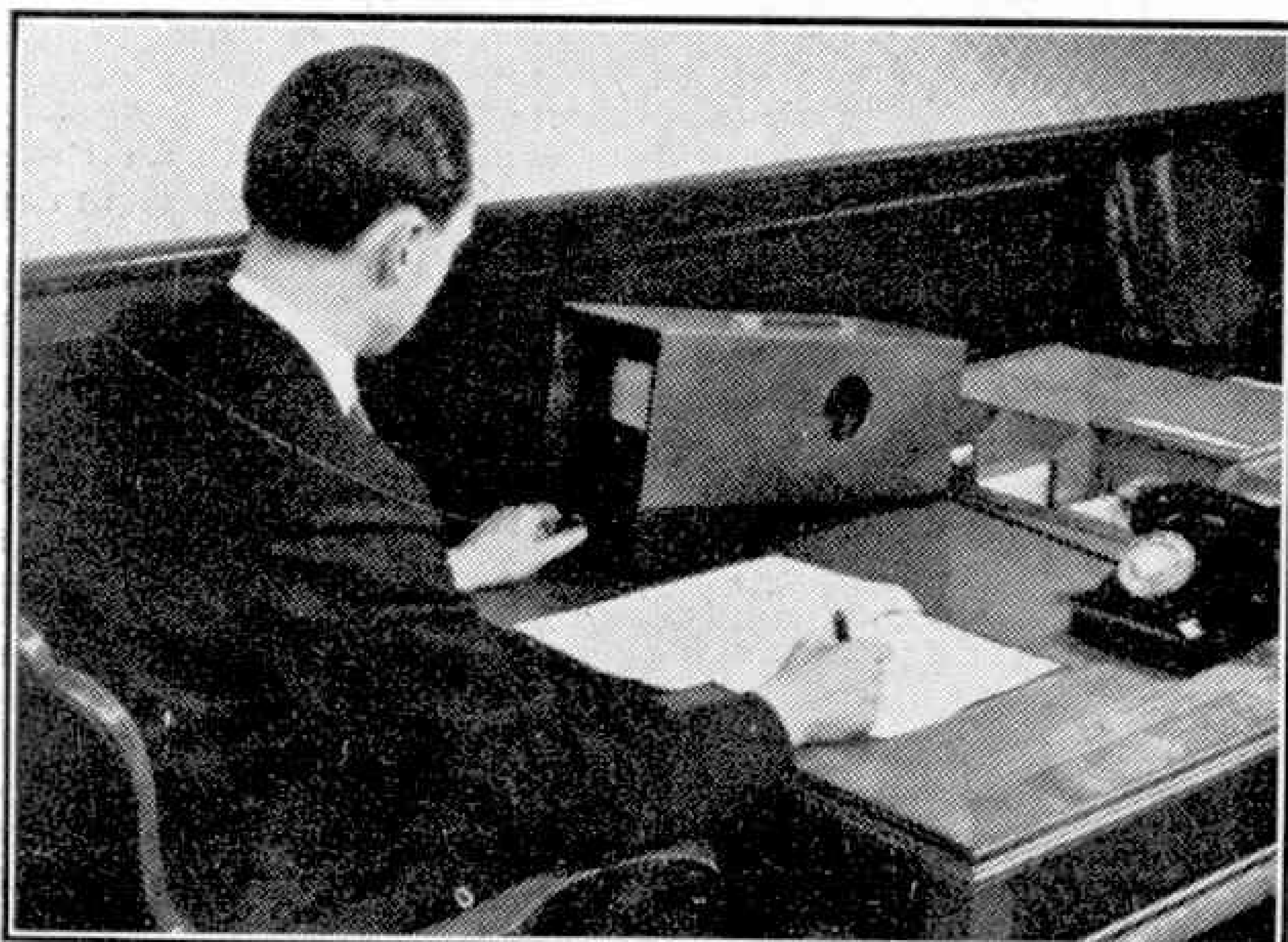


The transmitter at Osterley is mounted on top of the tower seen in this illustration.

new field of television is so far only experimental. But the experiments have been entirely successful, and they suggest a big future for the new medium.

Private television circuits would make it possible for departmental managers of, say, an insurance company to be in visual contact with outlying branches, and there would seem to be little doubt that in time television will link the branches of the big national commercial undertakings throughout Britain. And if we are to believe the statement of Lord Brabazon that transatlantic television will be with us within the next five years, and possibly

less, it will one day prove practicable for television to link the great commercial houses of Britain with their branches on the Continent and across the Atlantic. For all big things must have small beginnings, and the "small beginnings" amid the quiet dignity of a private bank in London suggest that the new field for television has a big future. After all, when one comes to think of it, communication by this means between offices is less of a Jules Verne development than rocket flight.



The "Flying Seagull"

Mr. Howard and his Wonder-bird

By John W. R. Taylor

WHEN I was invited to Ealing in July of this year, to meet the inventor of a model bird that flies by flapping its wings, I must admit that I was not very excited about it all. My scepticism was justified, for people have been trying to build such aircraft (technically known as ornithopters) since the dawn of history, and very few of them have worked.

Starting with the legendary Greek Icarus and our own King Bladud (852 B.C.), most would-be aviators who launched themselves into space with full-size wings came to a sticky end. A gentleman named Archytas of Tarentum earned a place in aviation history with a "flying pigeon" which he built 2,300 years ago; but, apart from a few examples in the 19th century, nobody ever had much success with ornithopters, even in model form.

I could, therefore, hardly believe my eyes when I saw a mechanical bird flap its way across a lawn in Ealing, and was then allowed to wind the rubber motor and launch it myself, while its inventor, 79-year-old Mr. W. F. Howard, watched. The incredible thing about Mr. Howard's Flying Seagull is that not only does it fly successfully every time it is launched, but that it flies *exactly* like a real bird, its paper wings flexing and flapping with uncanny realism. Indeed, this nearly proved its undoing on one occasion when it flapped its way over a fence and was promptly attacked by the next-door neighbour's cat!

Success did not come overnight to Mr. Howard. He built his first "bird" 40 years ago to amuse his son, who was ill in bed. It flew in circles round a stick; but young Howard was not satisfied. He wanted a *real* bird that flew straight and level. So Mr. Howard started again, building bird after bird without success, until at last he arrived at the present

design. Mechanically it is simple, the flapping motion being accomplished through a crank, controlled by a small rubber band which slows movement of the wings on the upbeat and then flicks them down sharply. This principle, combined with the use of thin paper wings, so shaped that they flex in flight just like the wings of a real bird, is the secret of Mr. Howard's success—and the reason why his model could never be



Mr. Howard with his Flying Seagull. Photograph by courtesy of "Middlesex County Times and West Middlesex Gazette."

scaled-up to carry a man.

Even after seeing his design, it would probably take a would-be imitator another 40 years to achieve the perfect formula by trial and error. But this will not be necessary, as it will soon be possible to buy in the shops a production version of the little Flying Seagull, appropriately re-named the Wonder-bird.

Mr. Howard is modest about his success, but a twinkle comes into his eyes when he talks about how his little bird may soon amuse not just one boy, ill in bed, but tens of thousands of boys all over the world. And the twinkle stays there when he goes on to explain the theory of his "cyclonic glider" which, he claims, proves wrong all current ideas on how an aeroplane flies.

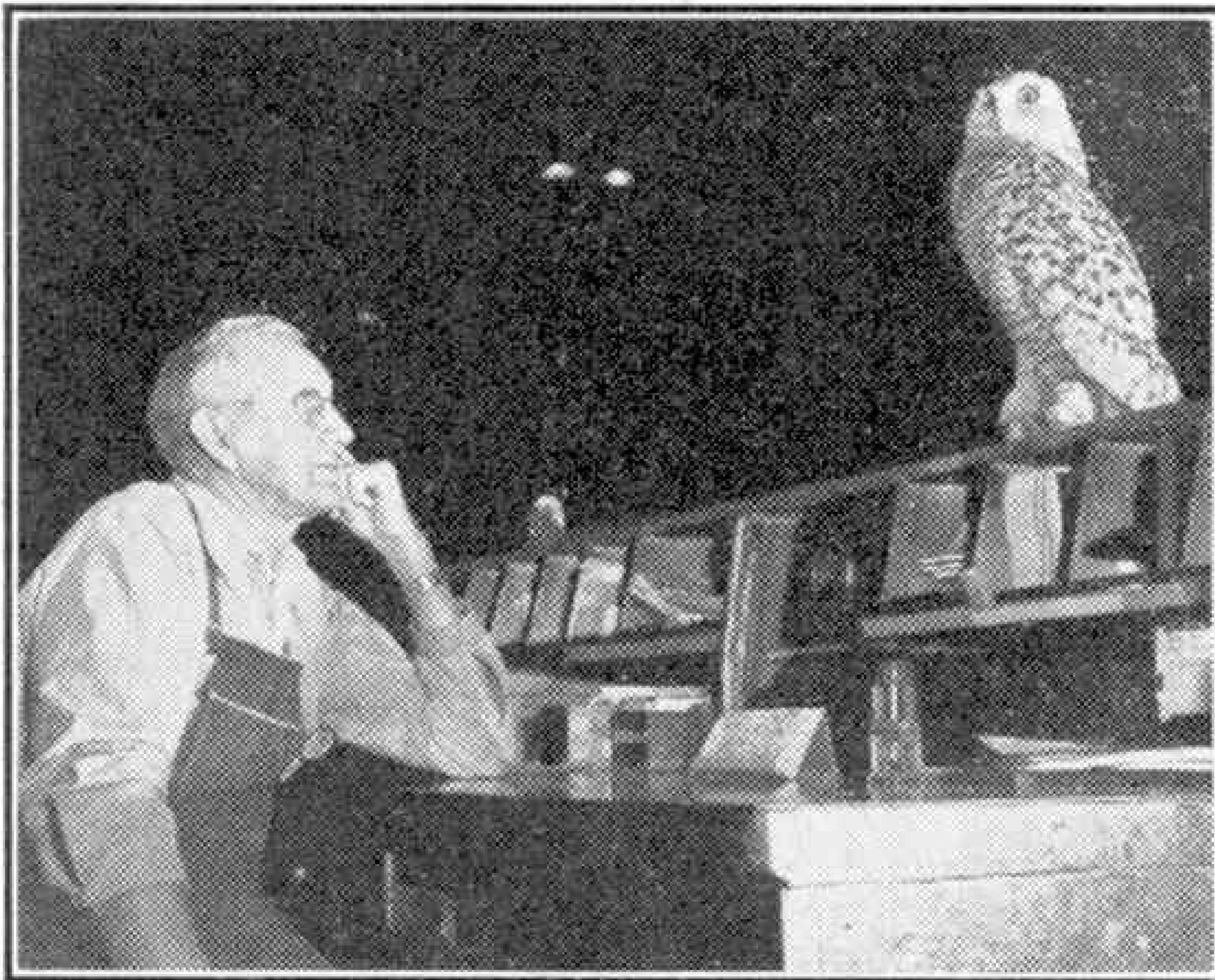
But that is another story.

White Owls for Weather Forecasting

I enjoyed this story by Reynolds Phillips when I read it in the Boeing Magazine, which is published by the Boeing Airplane Company in Seattle, on the Pacific Coast of the United States. I thought readers of the M.M. would like it too, and the Editor of the Boeing Magazine agreed with me, so here it is. Write and tell me what you think of these novel weather forecasting ideas.

—The Editor.

SOME people go to an awful lot of trouble for something they could have got the easy way. Take the U.S. military forces, for instance. They employ a lot



White Owls are weatherwise and to see one is a sure sign of a snowy winter. To see three . . . but read Reynolds Phillips' article to find what that means, while John Finkbonner continues to look for inspiration to the white owl on his desk.

of ground stations, a lot of airplanes (mostly Boeing), and a lot of super-scientific instruments, and both Air Force and Navy send special planes out to look hurricanes in the eye.

All this, and it still rains.

We have a much simpler system and we are going to reveal it. It will relegate to the ash heap all such nonsense as dropsondes, balloons and barometers.

Since we can see you sneering now, let us hasten to point out that this simple system of ours is what Boeing employees use for long-range forecasting the weather that's about to happen in Seattle.

In all modesty, we must admit that we did not originate this amazingly accurate system. We simply did with weathercasting what a great many people have suggested doing with much of the countryside: Give it back to the Indians.

It all started on a dull day in October

of 1949. The editor recalled the ancient legend that Indians can out-predict anyone on the weather. So he sent a reporter out to interrogate five Indian employees. The reporter, no respecter of legends, confidently expected to get five different answers. Hah!

He talked first to a William DePoe, who predicted thusly:

"Pally, this is going to be the roughest winter you ever saw. Last time the old folks of the Mackaw tribe up at Neah Bay saw a white owl, it came down snow all winter. This fall, they've already seen three white owls."

He went on to see a fellow name of Lucky Bear, who said: "This winter? Br-r-r! A rugged one. You can tell by studying the streams and the mountains."

And Lucky's uncle, a John Finkbonner, said: "I notice the geese are coming down from Canada early this year. They've got sense enough to get out when big snows are coming, which is more sense than people have. Probably won't stop till they get to Ecuador."

It turned out, to the reporter's consternation, that all five of the weather consultants agreed. It turned out they were right, too. A blizzard hit usually mild Seattle. The editor was snow-

bound before he ever got out of town.

In 1950, five other Indian employees were consulted. Like their predecessors, all of them agreed, this time, on a mild winter. Like their predecessors, they were so right.

Matter of fact, so successful have the Indians proved themselves that their annual prediction has by now become a tradition, not only at Boeing but through the whole Seattle area. By August employees begin bombarding us with reminders. In September the daily press begins calling up and demanding: "Say, when you gonna talk to them weathermen of yours?"

Of course, there are always the sceptics who refuse to recognise a fact, no matter which side it is buttered on. Two years ago the government's official Seattle weatherman rejected, with a sneer, our offer of assistance. (Continued on page 480)

Corsican Days

By E. Emrys Jones

IF you travel south-east from Marseilles, a night journey by boat will bring you to Corsica. As you approach the island you will be spellbound by the chaotic pile of purple mountains, thickly covered with vegetation, that forms its core, for it is a very mountainous country indeed. At first you might think that it is a Robinson Crusoe island, because it is thinly populated and life is very leisurely there. But it has many interesting historic associations. One of these is with Napoleon, who hailed from Ajaccio, the capital of the island. His house can still be seen in a very unpretentious back street of this overgrown village, which is hidden at the head of an enormous bay.

Another is with Nelson, who lost his eye while serving in Corsican waters. His commander, Lord Hood, was supporting the Corsican Nationalists in their efforts to capture Calvi in 1794. Nelson was in charge of land batteries bombarding the fortress and was wounded there.

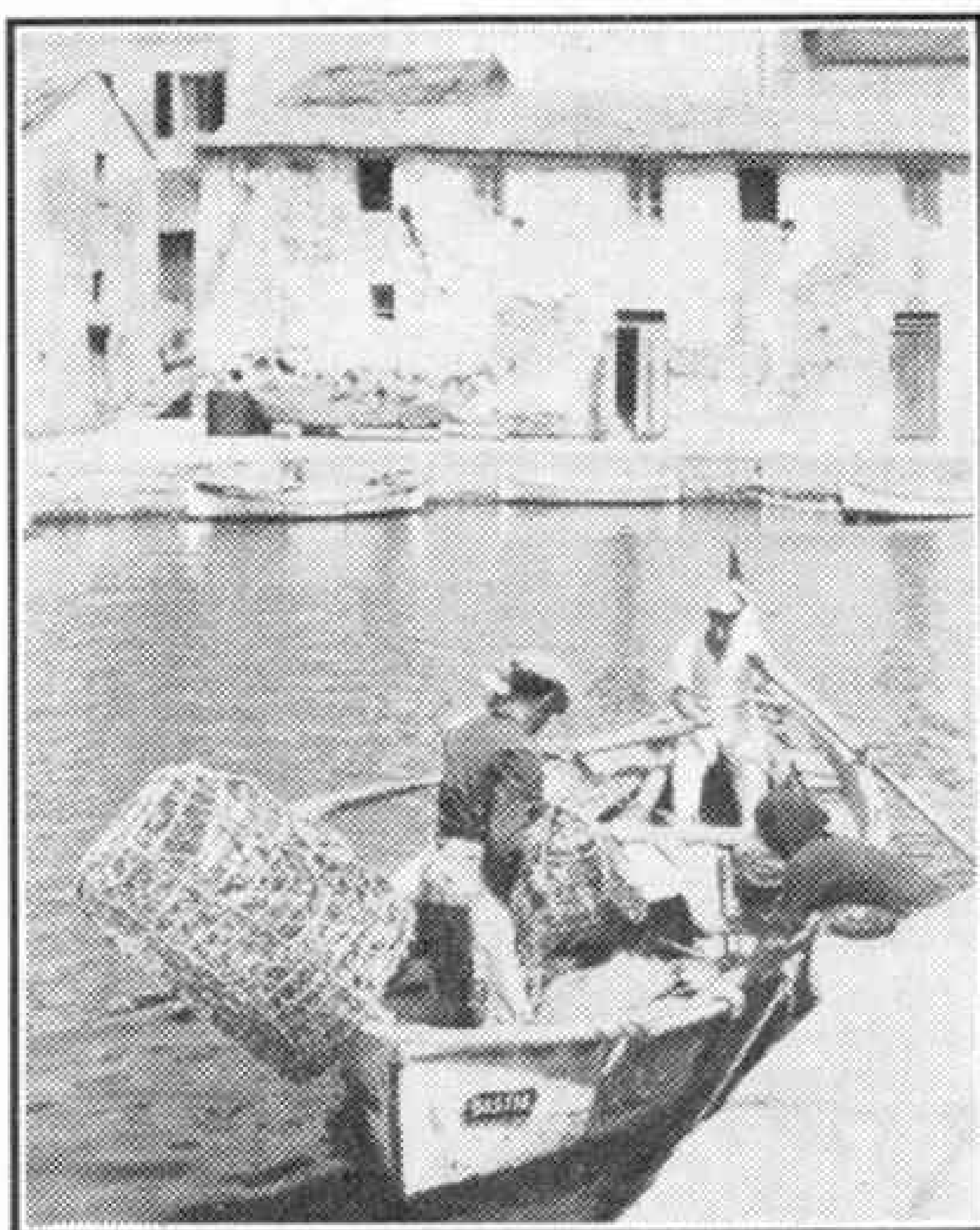
The ancient town of Calvi is encircled by 16th century ramparts and has a background of magnificent mountains. The scenery around this part of the island is breath-taking and gives the impression that little has changed through the centuries. Nearby is Ile-Rouse, a town founded in the 18th century, where there is the clearest blue water I have ever seen; bathing there on a hot August day is a sheer delight.

The mountain slopes right down to the sea are covered with a thick growth of evergreen shrub called "maquis," a word that became synonymous with French valour during the days of French resistance. This maquis is a mixture of wild thyme, rosemary and myrtle, and has a distinct

aromatic scent, reminding one of chopped sage. It is said that Napoleon recalled the smell while on his death bed at St. Helena. It is one that is a reminder of home to every Corsican.

Agriculture is the main industry of the island. Each family cultivates enough for its own needs. On the mountain slopes grow the olive trees and there too you will find the vines, while wheat, maize, vegetables, melons and tomatoes grow readily in the fertile soil of the coastal plain and valleys. Any surplus produce is sold, and clothing, goods, coffee and utensils are bought with the proceeds.

Farming methods are primitive by our standards. Corn is sown and reaped by hand. Ploughs are primitive too. Sheep, cattle and goats graze on the herbage growing in patches in the maquis. When night time comes along, the animals are rounded up and herded into the ground floor of the house. Obviously this is for protection from thieves! Houses are built like



A lobster boat arriving in a harbour near Bastia, in the north-east corner of Corsica.

fortresses, several storeys high and widening at the base, with thick iron bars criss-crossing the lower windows. Those in the villages are packed tightly together, usually on rocky pinnacles. Thus each village is really a community, ready to defend itself if needs be.

Corsica's past has been so turbulent that it would have been dangerous for anyone to live in an isolated farmhouse. The farmer leaves the village every morning and takes his animals with him. After completing his day's work he returns with his stock at sundown. Then you will hear doors banging, bolts creaking, and keys clicking in gigantic locks!

In the interior of the island are many chestnut forests. Pigs feed on the

chestnuts; this means a goodly supply of bacon and pork for locals and visitors alike. Chestnut flour is mixed with wheat and a very tasty loaf results. Walnuts are often added to give an additional flavour.

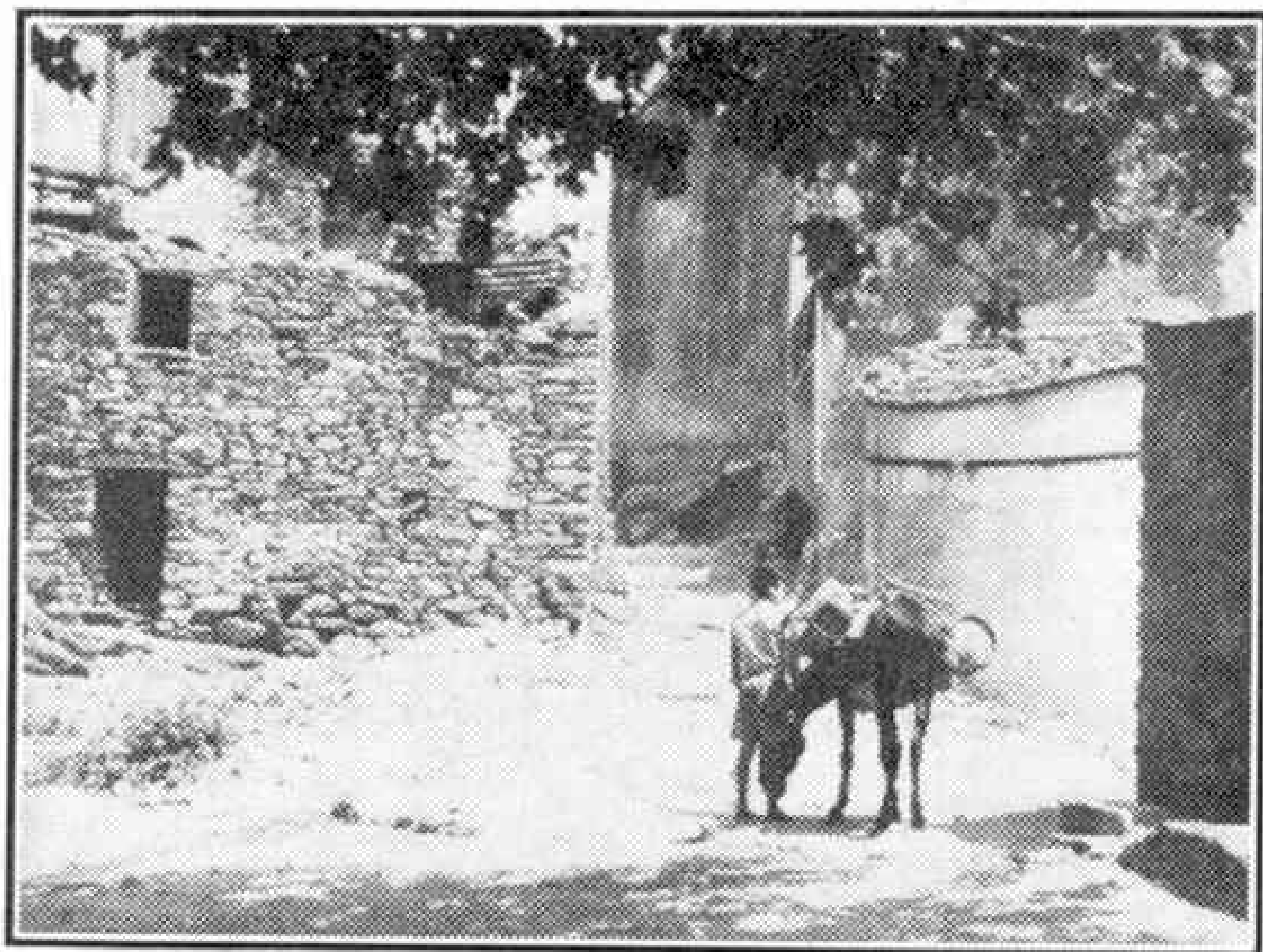
It is the ambition of every Corsican family to have a doctor, lawyer, engineer or teacher in it. This means that the member concerned leaves Corsica for France. This they do not like, and it is the ambition of every Corsican to return one day and spend his retirement in the native village.

The Corse, the inhabitants of the island, are of Italian origin, and generally are of the true Southern Italian type, short and dark. They speak their own language, Corse, which is a form of Italian; French is also spoken, and is the official language of Corsica, which is part of France.

The climate is grand, with hot sunny summers and cool winters. You can ski on the high slopes during winter and quickly descend to the plain where the water is still warm enough for bathing!

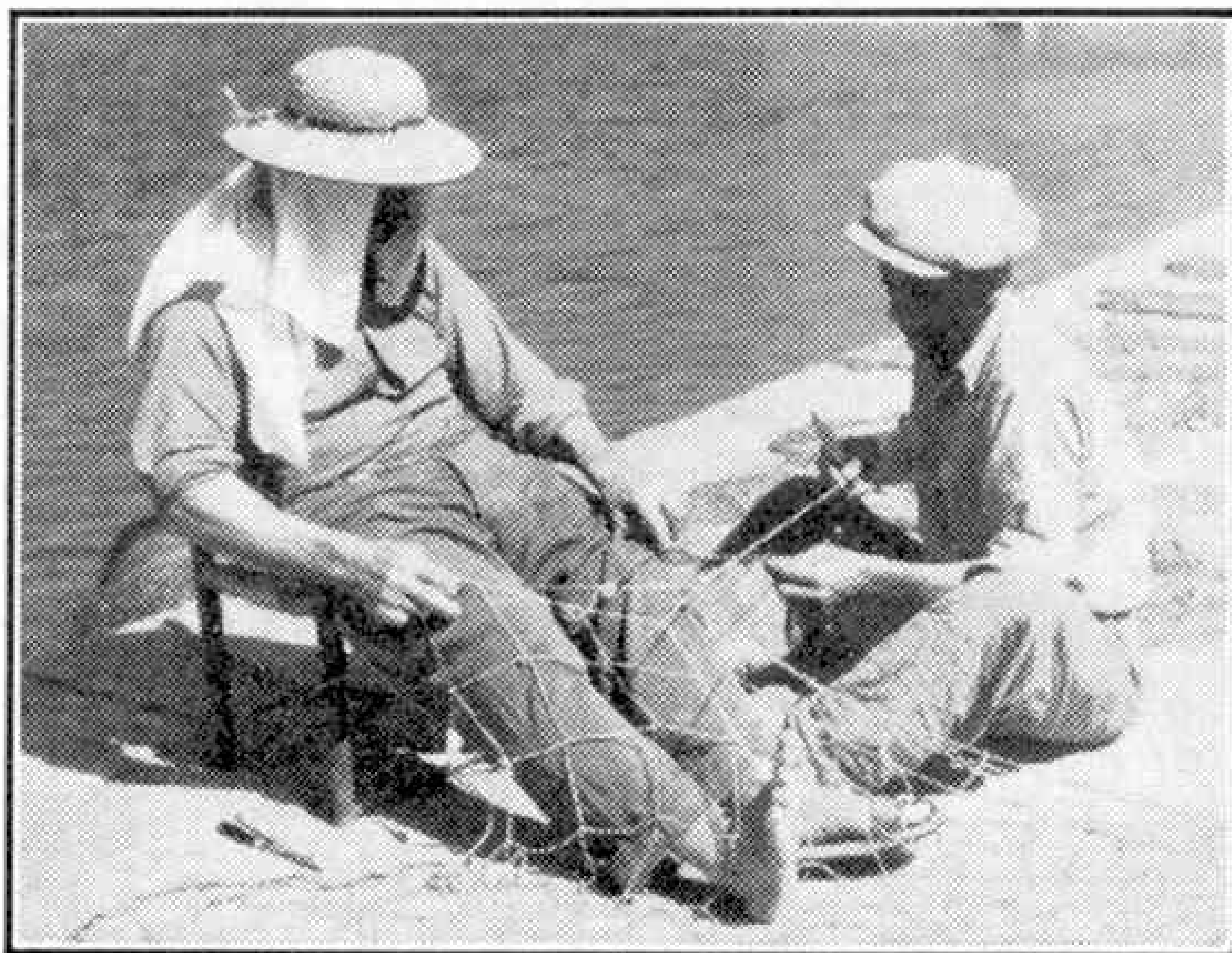
The roads are narrow, zig-zag and often perched high up on the hillside with a sheer drop into the sea! Corkscrew bends and steep gradients must be taken in their stride. One main road passes right through the centre of the island, through the utter desolation of wild uninhabited mountainous country.

Let us explore one or two more places.



The donkey is useful in Corsica.

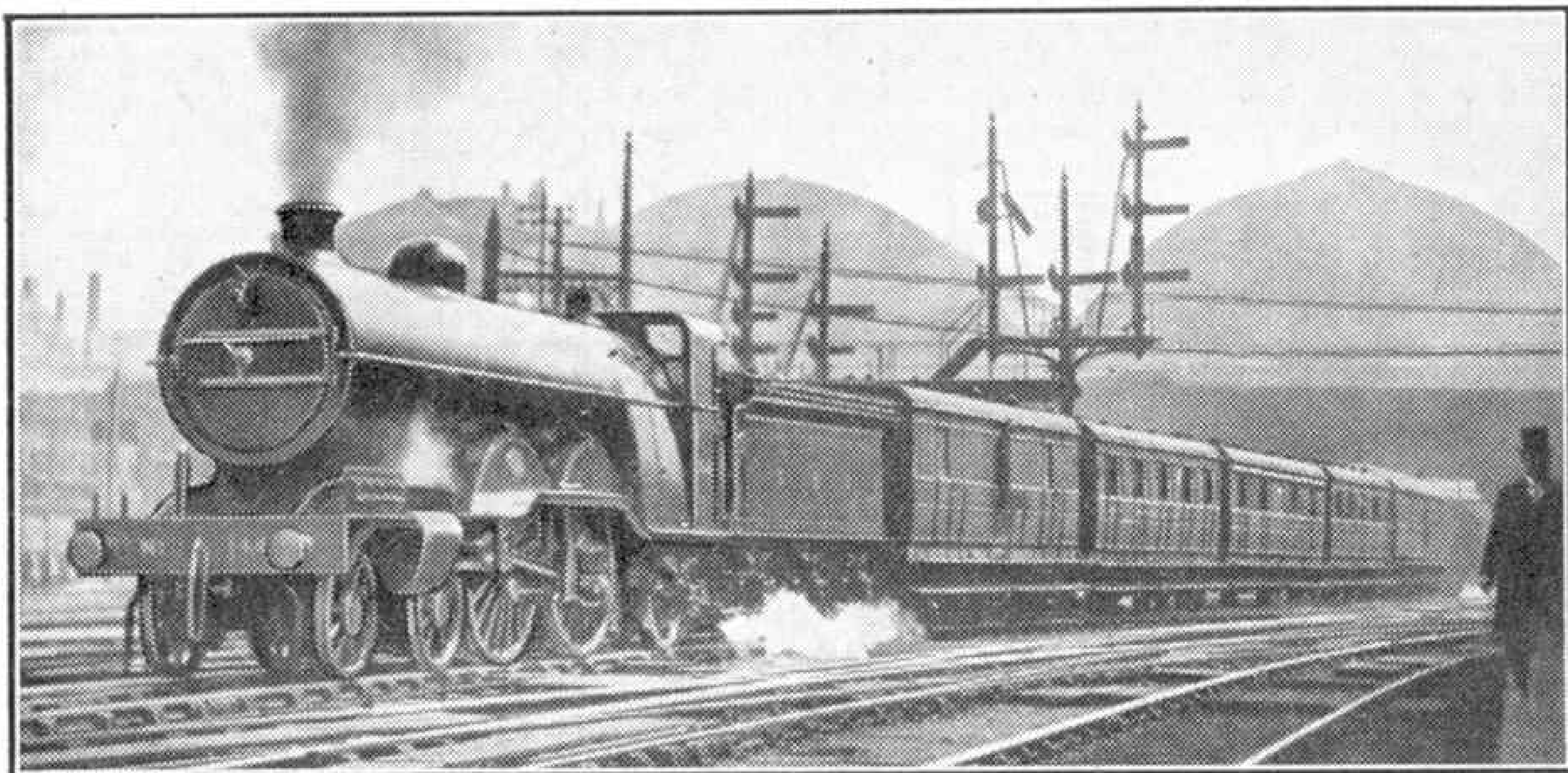
To me Cap Corse in the extreme north-east is the most beautiful and most romantic part of Corsica. Bastia is the main town of this part of the island. It is a small fishing port.



Master and apprentice. A scene in a Cap Corse fishing village.

One day, in 1944, I was walking along a deserted quayside in Bastia. It was three o'clock and everyone, apparently, was enjoying the siesta. I was busily examining the small craft, when I noticed another man in R.A.F. uniform doing the same thing. I continued my walk and came face to face with this airman. To my surprise he spoke to me in Welsh and said "I know you, we were at school together." As so we were! What a coincidence that we should meet on a quayside in Bastia after a parting of 14 years!

Corsica could become Europe's premier holiday resort. The island has everything—warm clear water for bathing, sea and river fishing, mountaineering and winter sports, and its climate is perfection. But no—the Corsican prefers to jog along as best he can. He is not interested in motor cars or visitors. The village inn can supply you with a clean if somewhat hard bed, a large jug of cold water for washing and shaving, and two wooden pegs for hanging your clothes. They may not believe in new fangled ideas like wardrobes, but they can supply you with a grand meal of egg and chips or bacon and eggs and you can get coffee anywhere.



A Century of Progress

King's Cross and the old Great Northern Railway

By R. A. H. Weight

JUST 100 years ago, in October 1852, one of London's principal railway termini, King's Cross, was opened for traffic. Two months previously what was called the "*Towns Route*," linking Peterborough with Doncaster by way of Grantham, Newark and Retford, had been brought into regular service. This constituted the main line of the old Great Northern Railway which, with many additional tracks and modernisations, has become part of the British Railways Eastern Region as we know it to-day and of the East Coast Route to Scotland.

Trains had been running through Spalding, Boston and Lincoln for two years prior to those events of 1852, for the G.N.R. had commenced operations locally in Lincolnshire with an early headquarters and repair shop at Boston. In London the temporary terminus used until King's Cross was ready was called Maiden Lane, and was situated not far from the present approach tracks to the Locomotive and Goods Depots in the vicinity of Belle Isle signal box and junctions. These now stand between the two tunnels that are such a handicap to King's Cross traffic working, as the outward tracks are on a sharply-rising gradient.

In the illustration at the head of the page a train including typical G.N.R. 6-wheelers is seen leaving King's Cross for Cambridge in 1910. The engine is a large-boilered Atlantic, and the top-hatted figure on the right is Stationmaster Kemp. Photograph by W. J. Reynolds.

King's Cross station has been gradually enlarged internally, without much change in its characteristic external appearance. It has suburban platforms on its outer sides, two of which, one on each side, are connected by separate steeply inclined up and down single tracks with the Metropolitan "*widened lines*" of London Transport. These connections allow through passenger trains to run to and from Moorgate, and important freight services to reach Southern Region marshalling yards.

The route northward from King's Cross is through Finsbury Park and Wood Green, where in each case there are suburban junctions with one of the tracks carried by bridge over the main lines, with extensive sidings. Soon comes Potters Bar, where widening plans aim to relieve the present congestion, due to there being only two tracks. We go on past Hitchin, and then Peterborough, an important railway centre with former L.N.W.R., G.E.R., Midland and M. and G.N. Joint lines running in. Grantham follows, with Newark and Retford, where other lines are crossed on the level, an unusual feature of British Railways. At Doncaster, 156 miles from London, are the famous locomotive,

carriage and wagon works established in 1866 by the G.N.R. and greatly developed in succeeding years. Doncaster is the junction for the network of lines in the West Riding of Yorkshire that provides an important section of King's Cross traffic—the route of the *Queen of Scots*, the *Yorkshire Pullman* and other fast expresses between London, Leeds, Bradford and beyond.

It was not until 1874 that the present direct route from Doncaster to York through Selby was opened. Until 1923, when the L.N.E.R. group came into being, most of this was the property of the old North Eastern Railway, though the great station and historic city of York had for a long while been regarded as the frontier point, about half way between London and Edinburgh, for Great Northern engines and men. Until 1923 the specially lettered East Coast Joint Stock jointly operated by the Great Northern, North Eastern and North British Railways was worked by each company's locomotives in stages; from 1923 to 1947 the through workings were under L.N.E.R. control throughout. Now they are maintained by the Eastern, North Eastern and Scottish Regions of British Railways. The best known train, *The Flying Scotsman*, has been running at about the same starting times for 90 years.

On the former Great Northern section a long rise faces northbound trains from

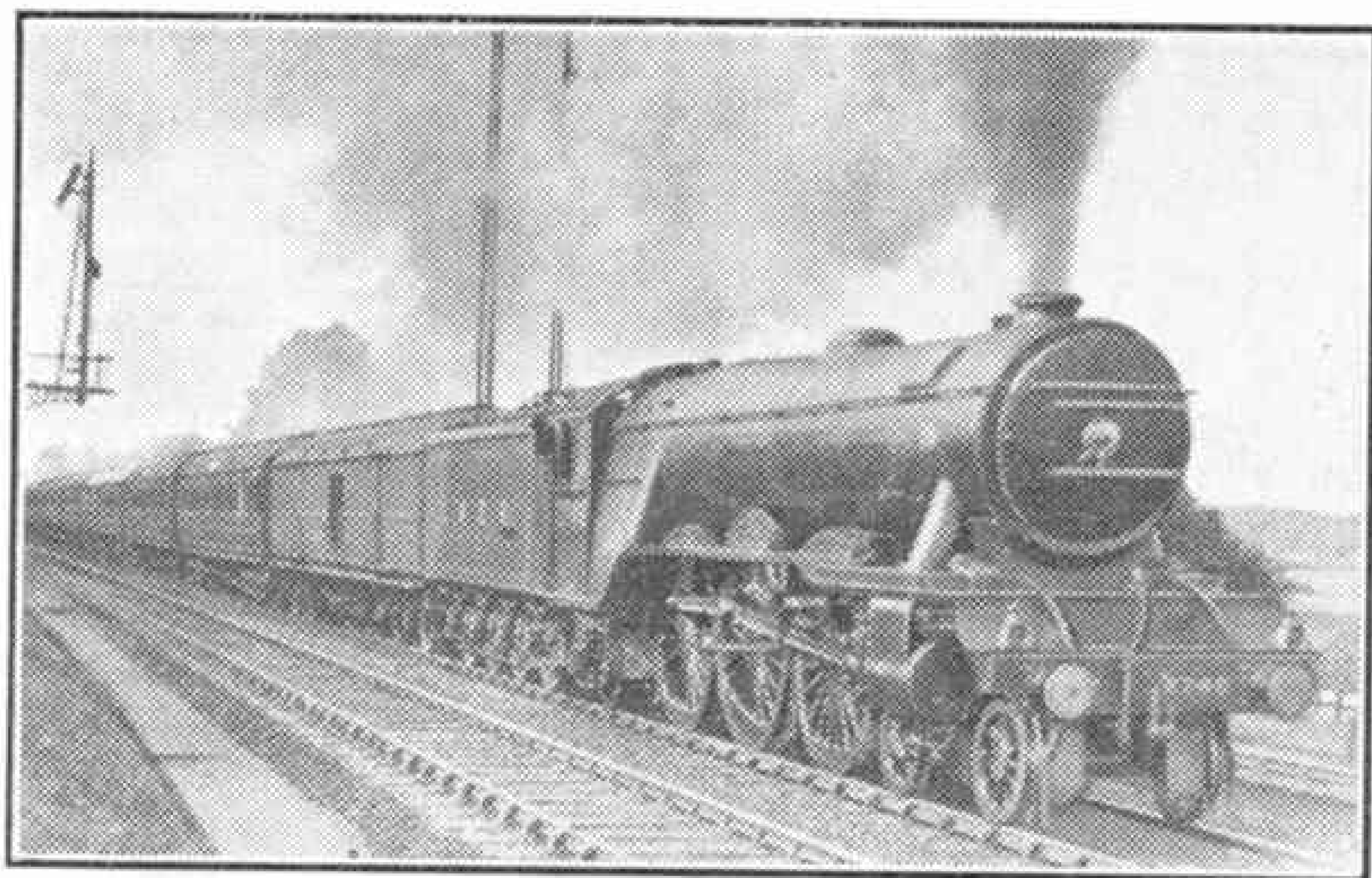
Peterborough. This terminates at the "old hundredth," or milepost 100 from King's Cross, close to Stoke (Lincs.) Signal Box, from which there is a $5\frac{1}{2}$ mile descent at 1 in 198 to Grantham station.



No. 2558 Tracery leaving Grantham, an important traffic point on the old G.N.R. main line. This illustration and the lower one on this page are reproduced by courtesy of T. G. Hepburn, Nottingham.

By main line men this is sometimes called "The hub of the Great Northern," as it is a little over half-way between London and York. Grantham is the junction for branch lines westward to Nottingham, Derby and Leicester, and eastward, branching off at Barkston, to Lincoln, Boston and Lincolnshire generally. It is also one of the principal engine changing stations for a number of expresses, with a locomotive shed proud of a long tradition for speed, good maintenance and performance that was created jointly with other depots in the days of the famous Stirling "Eight-foot" and "Seven-foot-six" single-drivers. The good work was carried on with the Ivatt Atlantics and 4-4-0s, then with the successive developments of Pacifics. Fine photographs showing typical expresses of some years ago near Stoke summit and just outside Grantham station are among our illustrations.

The "somersault" signal so typical of the old G.N.R. had the arm pivoted to a bracket fixed at right angles to the post, and this



No. 2746 Fairway, one of the Gresley Super-Pacifics, on the climb to Stoke Summit. Typical G.N.R. signals are shown in this illustration.

gave a very distinctive appearance when at "clear." The signal boxes and other lineside structures also were of typical appearance. The main line coaches, with bow ends and Pullman gangways and buckeye couplings, as I remember them during the first part of the present century,



The up Northumbrian at Potters Bar in charge of A1 No. 60120, now named Kittiwake. The engine and stock seen in this illustration, from a photograph by W. J. Reynolds, are typical of present-day equipment and provide interesting contrasts with those in the picture on page 444.

were solid and comfortable. Similar characteristics have persisted into more recent years, when fine, new L.N.E.R. vehicles have gradually displaced them. Many historic innovations have been seen on the route. These include the corridor tenders to enable engine crews to be changed on the world record non-stop regular summer London-Edinburgh run; cinema coaches; the *Northern Belle* cruise train; the large number of fully braked express goods or perishable traffic trains; high-speed streamline trains and engines that created and broke so many records; and many features tending to increase passengers' comfort and interest.

For 25 years I lived in a house overlooking this main line at a point about $5\frac{1}{4}$ miles out from King's Cross, and kept a continuous record of engines and workings. I was in close touch with officials and staffs, and for an even longer period travelled a great deal on main line and suburban trains, including many long and famous runs.

Some of the G.N. or L.N.E.R. dining car meals in happier times, served at the modest cost of a few shillings, stand out in my memory. For instance, there was the roast pheasant with game chips enjoyed while admiring a glorious sunset

from the up Leeds express. Then there were the cold fresh salmon enjoyed at lunch to the traditional rhythm of a six-wheeled bogie while timing decidedly the best run I ever had behind one of the experimental G.N.R. compound Atlantics, and a Scotch herring, grilled

to a turn, as part of an expansive breakfast of four courses, as we left Doncaster south-bound in 1923 on what proved to be my first experience of the exceptional power and capacity to regain time of the Gresley Pacifics. This "grilled herring" train was the 7.50 a.m. Leeds-King's Cross express, which was tremendously accelerated in 1932. I then christened it the "Breakfast Flyer," an unofficial title that was widely used.

An express fireman said to me at King's Cross Shed one day: "I shall be going to Leeds on all-fours on Monday."

"Can't you think of a more comfortable way of going than that?" I asked.

He laughed and replied: "Well; it may not be very comfortable and I shall have plenty of shovelling to do." What he meant was that he would be going on Atlantic No. 4444, on one of the Pullman expresses!

One Saturday afternoon about 1930 as an express stopped at King's Cross headed by *Flying Fox*, then class A1 No. 4475, the driver, whom I knew well, pointed to his watch, showing a punctual arrival, and called out "Here we are, 562 and 562 tons." The operating number of this up Newcastle, Scarborough and York train in the working time-table was No. 562, and by coincidence his train had the enormous tare weight of 562 tons—17 coaches.

That was by no means the longest express, or the heaviest, worked in or out of King's Cross about that time or since, but it was a tough proposition and too long for the platform. Had one of the King's Cross pioneers of a hundred years ago been able to see such a train and learn what it weighed and what accommodation it provided, would he have believed his own eyes and ears?

Our Ever-ready Life-boat Service

IN some countries the life-boat services have been maintained by the State from the beginning, but in Great Britain and a few other countries they always have been voluntary. In spite of the added difficulties that beset a voluntary organisation as compared with a State-owned one, our life-boat service has built up a magnificent record of heroic achievement since it was founded 128 years ago. It was then laid down that the service should go to the rescue of people whatever their nationality, in war as in peace, and this promise has been faithfully kept. During the second world war, for instance, our life-boats rescued 6,376 people—equivalent to 21 a week—and since the service was established the Royal National Life-boat Institution has given awards for the rescue of over 77,000 lives.

It might be thought that with all that is being done to make travel by sea and air more comfortable and safer, the work of this splendid service would be decreasing. But the opposite is the case. During the past six years it has been busier than ever before in time of peace, and has rescued nearly 3,000 lives.

For the most part the gallant acts performed are deeds of the whole crew, for as a crew the men share the dangers of the rescue and together they endure the exposure of long nights in stormy seas. From time to time, however, some act of individual bravery "spotlights" a particular member. An instance of this, described in the latest edition of the Royal National Life-boat Institution booklet *The Story of the Life-boat, 1824-1952*,* was a thrilling rescue effected off Margate one very dark night in September last year.

It was shortly after midnight when the coastguard saw distress signals outside the harbour. The life-boat put out, and found that the signals were from two men aboard a small yacht which, although at anchor, was rolling and pitching in a very rough sea. The men seemed afraid to move out of her cockpit, either to jump aboard the life-boat or to seize a line from her. So the coxswain brought the life-boat alongside the yacht. With much difficulty one of his crew, named A. Wilson, got aboard her. He lay on the yacht's small forecastle, in the darkness, and with the sea continually breaking over him. Holding on with one hand, he managed eventually with the other to haul on board from the life-boat first a line and



The North Foreland life-boat being launched.

then a 4½ in. cable attached to it, and to make the cable fast round the mast and forestay.

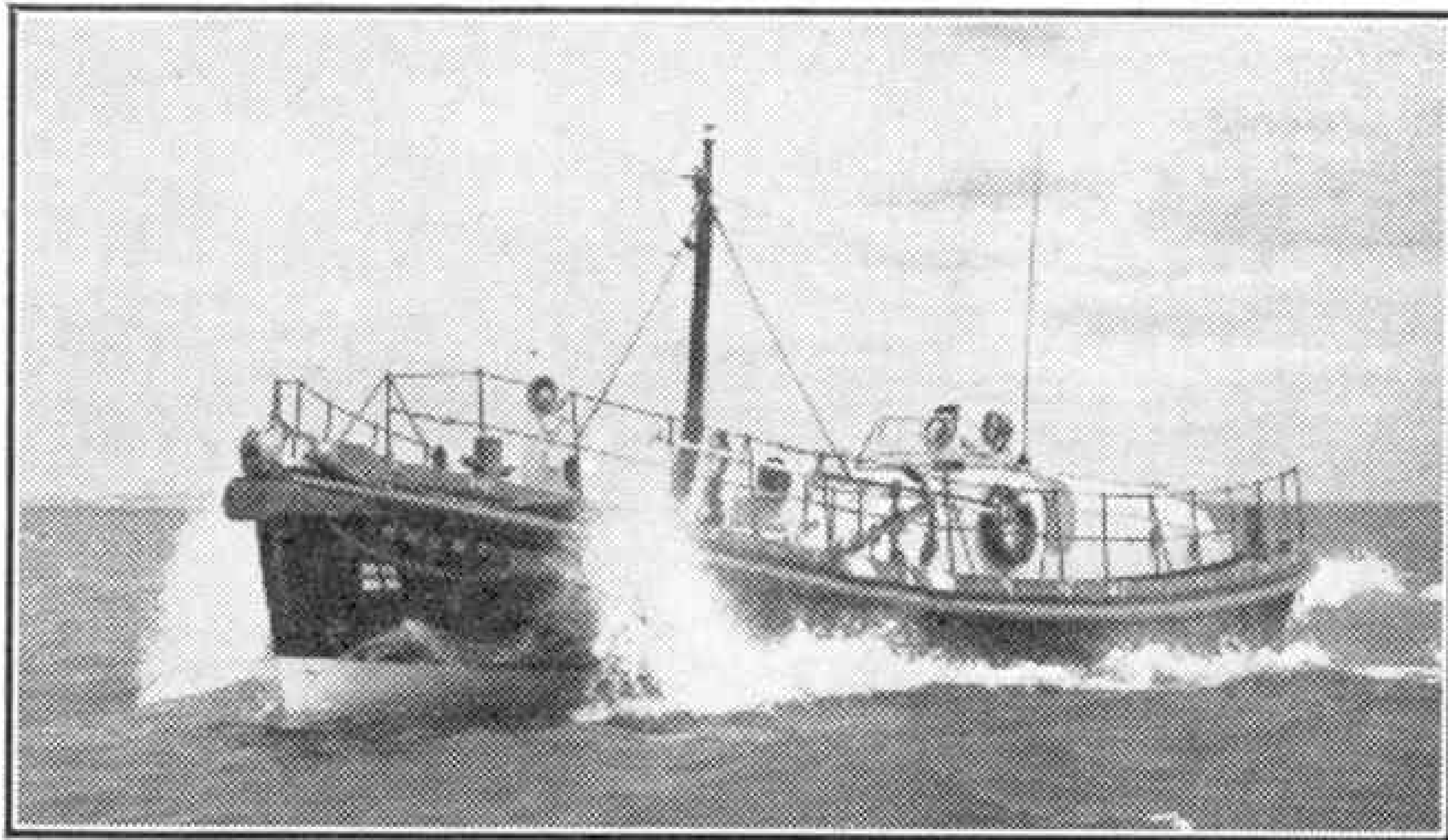
The yacht had two anchors down, but the chains and ropes of the two cables were in a tangle around the vessel's bollards. Still lying on the forecastle of the rolling and pitching craft, Wilson worked with his free hand to undo the tangle. Twice he almost rolled overboard, but hauled himself back again. At last the tangle was unravelled, he cast off the cables, and the yacht was free for the life-boat to tow her into the shelter of the harbour.

So the heroic work goes on.

In the last quarter of its first century the life-boat service went out to the rescue 8,000 times and 80 life-boatmen lost their lives. In the first quarter of its second century the corresponding figures were 11,000 and 47 respectively. Thus the price in lives lost has been almost halved. This welcome decrease reflects the great improvements that have taken place in life-boat construction. Indeed, the men who designed the *Original* in 1789 and the men who

founded the British life-boat service in 1824 would be amazed to see into what that first life-boat has developed.

The *Original* was a 30 ft. open rowing boat, propelled by oars and dependent upon baling to rid herself of water. The modern Barnett cabin life-boat is 52 ft. long, with automatic scuppers that empty out the water as fast as it comes in, air cases that keep the boat afloat even if full of water, and two 60 h.p. engines that would continue running under water.



The motor life-boat of today.

*"The Story of the Life-boat 1824-1952." Royal National Life-boat Institution, Life-boat House, 42, Grosvenor Gardens, London S.W.1. Price 1/- post free.

Air News

By John W. R. Taylor

British Rocket Progress

Mr. Duncan Sandys, Minister of Supply, has announced that British firms will soon start mass-producing anti-aircraft rockets able to fly at well over 2,000 m.p.h. and to heights greater than those attainable by any bomber aircraft. He added that these rockets can be steered or can steer themselves with great accuracy, and are capable of changing course rapidly as they would have to do to intercept aircraft taking evasive action. They can, in fact, twist and turn with five times the manoeuvrability of a fighter 'plane. One type of these rockets is shown in the upper photograph on this page.

Basic research on most of the rockets was done by Government experimental establishments; but their development has been entrusted to private companies, chiefly in the aircraft industry. Firing tests of various types of rocket have already been made over the sea at Aberporth, South Wales, and on the secret rocket range at Woomera, Australia.

Award for T.A.A.

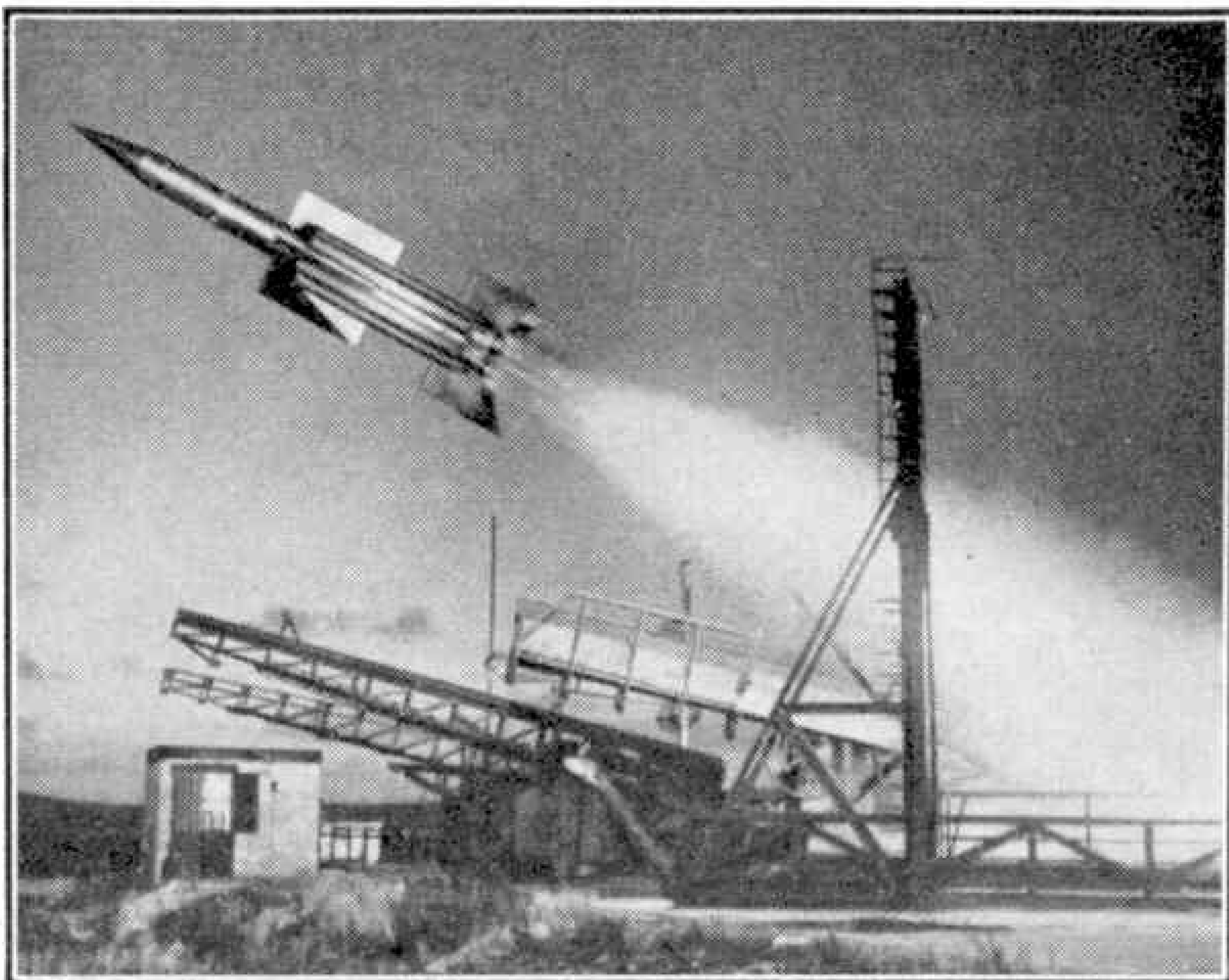
A special silver plaque has been sent to Trans-Australia Airlines by the Consolidated Vultee Aircraft Corporation, U.S.A., to commemorate the remarkable record of T.A.A.'s Convairliner *Thomas Mitchell*, which spent 10,000 hrs. in the air, covering more than 2,000,000 air miles, in its first 3½ years of service. The *Thomas Mitchell* was delivered in October 1948, and its achievement is believed to be a record, not only for a Convair but for any type of air liner.

Corsair Still in Production

Despite an almost complete turnover to jet fighters in the U.S. Air Force, the Navy of that country still finds its piston-engined fighters ideal for such duties as close ground support of troops. As a result, two new versions of the well-known, gull-winged Chance Vought Corsair have been put into production, nearly 14 years after the basic design was started.



Corsair AU-1, the latest version of the well-known Corsair piston-engined fighter aircraft. Photograph by courtesy of United Aircraft Corporation, U.S.A.



A British guided rocket taking off. It is being boosted up to its cruising speed by the motors attached to its sides. After a few seconds these boost motors drop off, and the missile continues its flight, driven by its own sustainer motor.

Altogether 12,759 Corsairs have been built, starting with the F4U-1 which served so well with the Royal Navy and U.S. Navy in the Pacific war. Over 981 major engineering changes and 21,000 production changes have turned it successively into the F4U-4B fighter-bomber, F4U-5 high-altitude fighter-bomber, F4U-5N night fighter, F4U-5NL winterised fighter, F4U-5P photographic aircraft, and now the new AU-1 and F4U-7, which are basically similar and intended for the U.S. and French Navies respectively. Both are powered by Pratt and Whitney R-2800 engines and incorporate lessons learned by Corsair pilots during two years' fighting in Korea, including heavier armament and more extensive armour plate for ground attack duties.

For Supersonic 'Bail-outs'

A new "bail-out cockpit capsule" which provides jet pilots with a safe means of emergency escape at supersonic speeds has been developed jointly by Douglas Aircraft and the U.S. Navy, and is ready for production.

When a pilot finds it necessary to abandon ship, all he has to do is touch off a rocket charge which blows the whole cockpit clear of the crashing aircraft. Three fins unfold at the rear end to stabilise the capsule, and a small parachute pops out to slow its forward speed. When a safe speed is reached, a main parachute opens to lower the cockpit, complete with pilot, safely to the ground.

The entire cockpit is sealed and pressurised to protect the pilot against lack of oxygen and other atmospheric conditions above 50,000 ft. If it comes down in the sea, it will float, with the aircraft's main storage batteries acting as a keel to keep it upright. Fresh air is

pumped into it by motion of the waves, and full survival kit is carried.

Flying for Fun

Max Conrad, a 48 yr. old American, believes that young people are not so air-minded as they ought to be; and he should know because he has ten children of his own. So he set out this Summer to show them

been flown from the Goodyear Factory at Akron, Ohio, where it was constructed, to the U.S. Navy Base at Lakehurst, New Jersey. Designated type "N," it is 324 ft. 5 in. long, has a helium gas capacity of 875,000 cu. ft., and is powered by two 800 h.p. Wright engines mounted inside its control car and driving the propellers through shafts. It carries a normal crew of 14 and its car has two decks, with all operational stations on the lower deck and crew's quarters on the upper one. Top speed with a 6½ ton payload is about 85 m.p.h.

Hustling the Pigeons

Among the latest unusual "passengers" carried by Silver City Airways are racing pigeons, more than 20 'plane-loads of which have been flown this Summer from Brussels to Paris, Southampton to Nantes and Denmark to Holland. The pigeons are packed into baskets, and taken hundreds of miles away from their lofts before being released from the ground to take part in long-distance races.

Another item of news from Silver City is that the company's cross-Channel car ferry service completed its 10,000th accident-free flight this Summer. Since the service was started four years ago, more than 30,000 cars, motor cycles and bicycles have been flown between England and France, 15,000 of them in the last 12 months.

Auster for U.S. Air Force Club

Nine U.S.A.F. airmen from the bomber base at Mildenhall, Suffolk, have bought an Auster light 'plane for their flying club—the first of its kind among U.S. airmen in England. The club is entirely unofficial and self-supporting, and the spare-time flyers have made it a condition of membership that for every hour in the air they will spend three hours at lectures to study British aviation law, meteorology and other subjects.

* * * *

Japan Air Lines and the Venezuelan company Linea Aeropostal Venezolana have each ordered two Avon-engined de Havilland Comet Series 2 jet-liners.



Piper Tri-Pacer, a special version of the 4-seat Pacer light 'plane referred to on this page. Photograph by courtesy of Piper Aircraft Corporation, U.S.A.

what a lot of fun can be got out of a light 'plane at little cost.

First of all he set up a new distance record for aircraft under 1,000 kg. weight, by flying his little 29 ft. wing span Piper Pacer non-stop 2,461 miles from Los Angeles to New York in 24 hr. 54 min. He then flew the same aircraft from Washington to Stavanger, Norway—the first time the Atlantic had been crossed by such a small machine. His journey, which was made via Labrador, Greenland, Iceland and Scotland, cost him £36, which is £129 less than the normal airline fare.

The four-seat Pacer is the latest and biggest of the famous Piper series of single-engined light 'planes, with a 125 h.p. Lycoming engine and speed of 135 m.p.h. A special version with nose wheel undercarriage, known as the Tri-Pacer, is illustrated on this page.

200 Miles in 18 Minutes

A record of a very different sort was set up by test pilot David Morgan on the evening of 10th July last, when he flew the prototype Supermarine Swift jet fighter from London to Brussels, a distance of 200.38 miles, in 18 min., 3.3 sec.

The Swift, which is powered by a Rolls-Royce Avon turbojet, was on its way to Brussels to take part in an air display organised by the North Atlantic Treaty Organisation. Its performance can have left little doubt of the quality of the R.A.F.'s new super-priority interceptors, as its average speed of 665.9 m.p.h. was only 5 m.p.h. less than the present World Absolute Speed Record over a 3 km. (1.8 miles) course.

Airship De ivered

The biggest non-rigid airship (blimp) ever built has



The prototype Vickers Supermarine Swift jet fighter flown by David Morgan.

BOOKS TO READ

B.R. LOCOMOTIVE TESTING BULLETINS

British Railways are making copies of the Bulletins issued from time to time giving details of tests carried out at the Rugby or Swindon Locomotive Testing Stations, or by mobile testing units. These publications are specially for the benefit of locomotive engineers, but students in the locomotive profession and really advanced enthusiasts also will find a great deal of interest in them.

At present three Bulletins are available. Nos. 1 and 2 deal respectively with tests made with G.W. Hall type and E. and N.E.R. B1 class 4-6-0s fitted with exhaust steam injectors. Bulletin No. 3 covers tests made with an L.M.R. 2-6-0 with live steam injector. The object of the present series of tests is to give a complete picture of the speed and power capabilities of the locomotives concerned, and to provide figures of the cost in coal of hauling different loads at different speeds over given routes.

Three further Bulletins are to be issued in which engines concerned will include B.R. standard types, and others will cover diesel-electric, gas-turbine and electric locomotives in order to offer a scientific basis of comparison between these different forms of motive power.

Copies of the separate Bulletins cost 10/- each, including postage, and they can be obtained from the Publicity Officer, Railway Executive, Room 323, 222, Marylebone Road, London N.W.1.

"TEACH YOURSELF MODEL-CRAFT"

By H. S. COLEMAN
(English Universities Press, 6/-)

If you are thinking of taking up model-making of any kind—railway, ship, aeroplane, furniture, scenic accessories, etc.—this is the ideal book to start you on the right road and to give you the thorough and accurate grounding so necessary if skill in modelcraft is to be attained.

It begins with an excellent chapter on the several good reasons for taking up this delightful spare-time activity, and subsequent chapters in the first part of the book deal with finding time for model-making and the accommodation in which to do it, and acquiring the correct technique. Under the general heading of "Practical Guidance" the second part is concerned with such important aspects of the hobby as scale dimensions of common objects; publications and plans; commercial kits; ship, scenic railway and architectural modelling, and the use of shellac.

"BIGGLES—AIR DETECTIVE"

By Capt. W. E. JOHNS (Latimer House, 5/-)

Crime in the air as well as on land and sea adds to the worries of the police forces of today. Coping with this latest form of wickedness is the special job of Detective Air Inspector Bigglesworth, better known as "Biggles," of New Scotland Yard. This book describes seven exciting cases of this kind, in which the famous detective succeeds by smart deduction and quick action in thwarting the law-breakers.

LIFE IN PONDS

By JOHN CLEGG (Warne, 1/-)

This simply-written little handbook provides the young naturalist with an excellent introduction to some of the plants and animals commonly found in ponds. It gives a brief account of their life history, with neat little drawings to aid identification, and some useful hints on the collecting and keeping of water creatures.

"POTTERY"

By MURRAY FIELDHOUSE (Foyle, 2/6)

The production of hand-made pottery of the traditional kind has tended to become regarded as a rather exclusive department of Art. It is hoped that this excellent book will do much to dispel this illusion, and to reveal pottery-making as essentially a homely craft in which the handworker can express in his creations a beauty of form and design that cannot be achieved by mass-production factory processes.

Like the many other handbooks in this series, *Pottery* has been written primarily for the beginner. After a brief survey of the history of pottery, it deals with the main types of pottery, the properties and particular uses of the clays employed, and the successive processes by which the amateur craftsman acquires the "how and why" that enables him to produce beautiful hand-made pottery that will add grace and charm to any home. Some beginners will prefer to take advantage of kiln space at potteries, brickworks or schools in which to "fire" or bake

their pottery, but practical guidance is given on the construction of home-made kilns for those who like to do everything for themselves. Interesting line drawings amplify the text.

"THE ABC OF MILITARY AIRCRAFT"

By JOHN W. R. TAYLOR
(Ian Allan, 2/6)

There are few up-to-date books on aircraft recognition, and this handy little pocket book will have a special appeal to the aircraft spotter. It will be of value also to the model aircraft enthusiast, in providing him with correct details of dimensions and performance of the 60 types of British, American and Canadian military aircraft with which it deals.

The machines are dealt with alphabetically according to type names, and in each case there is a good half-tone illustration, small 3-view silhouette drawings, and a summary of structural features.

"RAILWAYS BEFORE THE GROUPING"

No. 1 (L.B. and S.C.R.)
By O. J. MORRIS (Ian Allan, 3/-)

This is the first of the series of similar books that are designed to show, in pictures, something of the locomotives, trains and equipment of our railways as they were before the grouping of 1923.

O. J. Morris is well fitted to deal with the "Brighton." He introduces a splendid gallery of pictures with an entertaining and enthusiastic foreword giving a brief account of Brighton locomotive matters from the days of J. C. Craven, with his astonishing variety of engines, through the orderly glories of the Stroudley period to the more sober practice of Douglas Earle Marsh and "The Colonel," as L. M. Billinton was called. Apart from "straight" pictures of engines and trains, there are several "inside" views that will delight the enthusiast.

THE COUNTERFEIT MYSTERY

By ERIC LEYLAND
(Museum Press, 6/-)

This further exciting adventure of Bill, Sam and Henry concerns the tracking down of a gang of counterfeiters operating in Ramehead, a small town in the West Country. The trio, led by Henry, eventually bring the rogues to justice, perhaps more by luck than judgment, but who cares? This is a rattling good story.

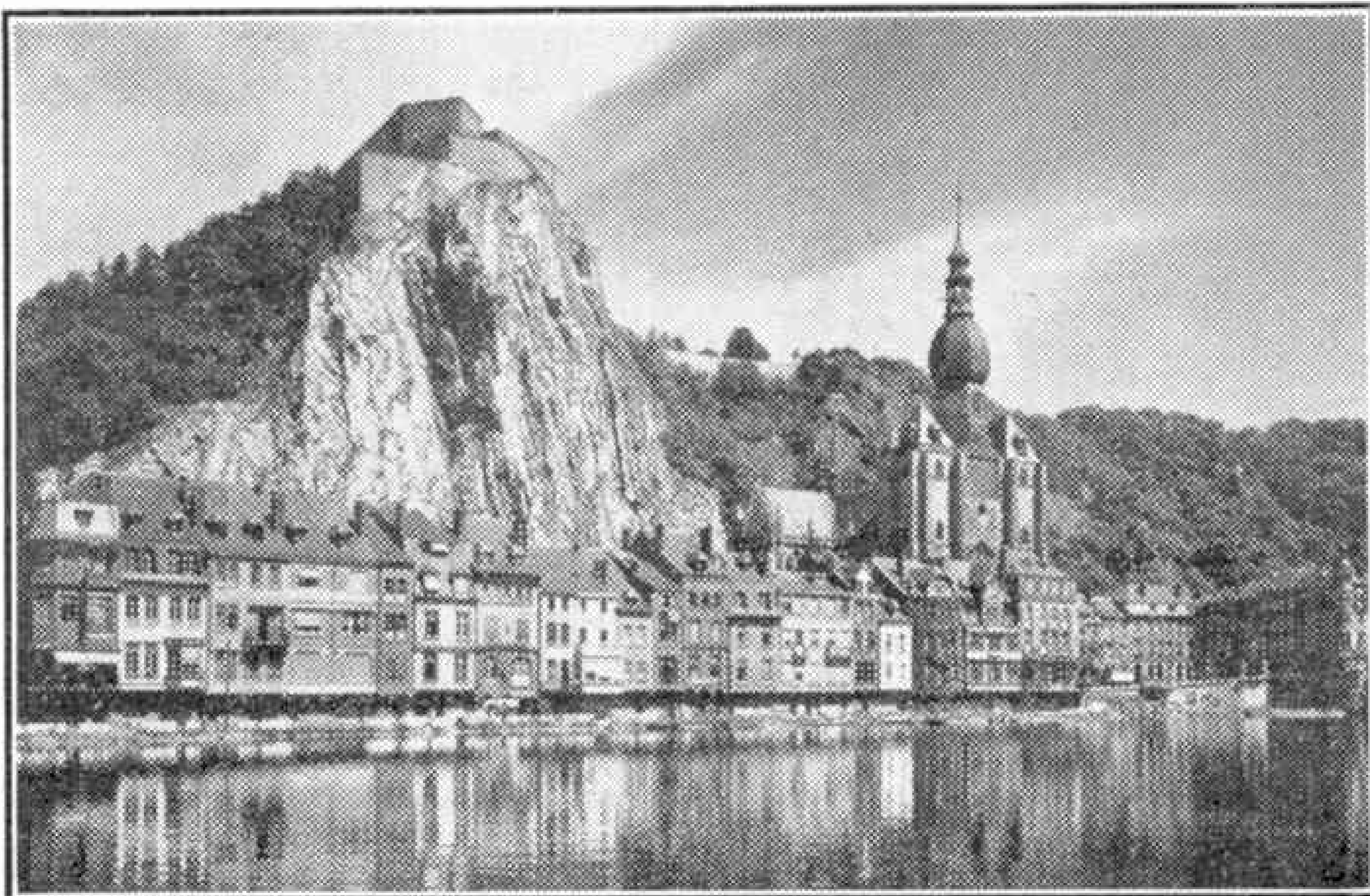
On these pages we review books of interest and of use to readers of the "M.M." With certain exceptions, which are indicated, these should be ordered through a bookseller.

"WE GO TO BELGIUM AND LUXEMBOURG"

By MARY DUNN
(Harrap, 8/6)

This is the second volume in a new series of travel books designed to take young readers on a tour of several European countries, introducing places and people of interest. The first book dealt with Paris, and the volume reviewed here is concerned with Belgium and Luxembourg. The journey is described as seen through the eyes of the author's young daughter Jane and her friend Michael. The two young people are the guests of M. Janssens, who lives in the Belgian capital, and they tour the country in his motor car, visiting the main towns and ports, and making a brief trip to Luxembourg, one of Europe's smallest principalities.

The story is well told, with vivid descriptions skilfully blended with cheerful conversation, and it is illustrated by good half-tone photographs of some of the places visited by Jane and her companion. One of these pictures is reproduced on this page.



Dinant. An illustration from "We go to Belgium and Luxembourg," by Mary Dunn, reviewed on this page. Photo Sergysels. By courtesy of the Belgian State Tourist Office.

"BRITISH TRAINS IN PICTURES"

(Ian Allan, 2/6)

British Trains in Pictures is a 32-page book with nice big pages and large pictures. Important passenger trains with correspondingly proud locomotives naturally have their share of attention, but so have the more humble stopping train, the "push-pull," the "parcels," the freighter, and all those that go to make up the daily round.

The cover is in colour and the Southern enthusiast will find to his delight that this features some of the platforms at Waterloo, with a Nelson 4-6-0 prominent in the foreground.

"THE OBSERVER'S BOOK OF THE LARGER BRITISH MOTHS"

Compiled by R. L. E. FORD, F.R.E.S. (Warne, 5/-)

This addition to the well-known "Observer's" series of pocket guides is intended as an introduction to the study of British moths. It happens that the whole of the larger of our moths, including those which fly in the daytime and those having the largest and most conspicuous of caterpillars, fall into the group classified as *Bombyces*. Practically the whole of this important group is dealt with in this handy little book, which includes also the *Sphinges* super-family and examples of nine of the largest

representatives of other families; in all 113 species. All these are illustrated in colour, together with 86 half-tone pictures of eggs, larvæ and pupæ. Descriptions are short, but brief field notes have been added so as to provide a sound introduction to the study of the insects.

"BUILDING AND LAYING 'O' GAUGE TRACKWORK"

By E. F. CARTER (Percival Marshall & Co. Ltd., 9/6)

This book has been produced for the benefit of those enthusiasts who wish to make up their track to suit their own particular layout requirements from the miniature permanent way components at present on the market. It consists of more than 100 pages of practical hints on miniature track making. Even the model railway engineer of some experience will find in its pages much information that will be useful to him.

A miniature railway is only as good as its track, so that considerable emphasis is laid on the need for accurate work in the assembly of the various

components into the finished track. Straight track is first dealt with, and then come curved track, points and crossings, with the calculations involved in their design. Finally, special points and junctions of more or less complex design are considered.

Throughout the aspiring permanent way worker is introduced to simple methods. The snags and difficulties that inevitably crop up are not forgotten, and notes on flat-bottomed rail and a series of useful tables bring the story to an end. The book is illustrated.

"THE LUCK OF SALLOWBY"

By MALCOLM SAVILLE
(Lutterworth Press, 8/6)

Here is another exciting adventure story about the Jillies—Mandy, Prue and Tim. The scene is set in the Fen country of East Anglia, at a time when the rivers are rising, and every able-bodied man and woman has been called out to fight the encroaching water. The Jillies and their friends Guy and Mark Standing play their parts well in this battle, and it is when the danger is at its height that they discover a plot to steal the legendary "*Luck of Sallowby*," a battle axe reputed to have been used by Hereward the Wake, from its hiding place at Sallowby Manor. The Jillies meet an old enemy, but though Mark falls into his hands and Mandy is trapped in an empty house in the path of the floods, they get the better of him in the end.

A coloured frontispiece and the several excellent line drawings illustrate incidents in the story.

"MILITARY AIRCRAFT OF THE WORLD"

(Iliffe, 2/6)

In this most interesting study of modern military aircraft the operational and experimental machines of all nations are critically reviewed. It is lavishly illustrated with over 180 photographs and drawings showing the latest fighters and bombers, and machines specially developed for ground attack, reconnaissance, artillery spotting and liaison, naval strike and anti-submarine work, transport, training and miscellaneous duties.

Those Other Named Trains

MANY important British express trains have titles, and the various *Scots*, *Belles*, *Continental*s and so on, the aristocrats of the railway world, are well known everywhere. But it is not with such important trains that this article is concerned, as the photographs show. Rather are we dealing with quite ordinary trains, past and present, that have attained the distinction of titles, but not official ones. Probably just such another ordinary train plays a most important part in the daily round of most of us. It may be the train that takes us to school, or to work, and more important, that brings us back again. It has no title in the timetable and to many it may be simply "the 8.15," but perhaps we have our own name for it or for the service of which it forms part. If not, then perhaps the railwaymen have!

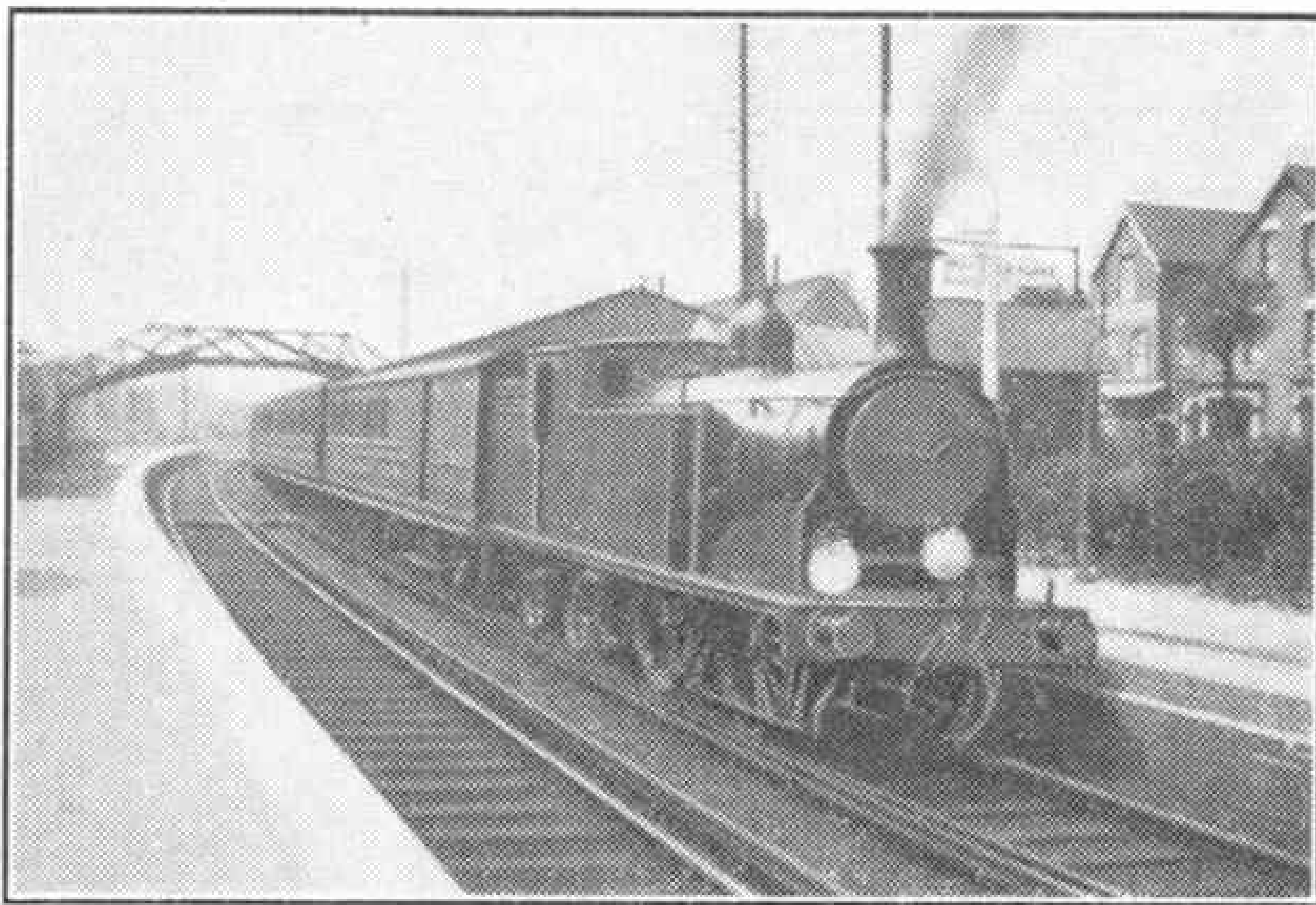
Names of this kind usually stick. They may even be handed down from one generation of railwaymen or travellers to another as the *Dutchman* and *The Corridor* have been. Such a famous name as *The Flying Scotsman* actually began in this way, for it was in use long before it was officially recognised in 1924.

Schoolboys are noted for their habit of applying nicknames to things—and people—so that it is not surprising to learn that the quite ordinary-looking Southern train shown in the photograph reproduced on this page was affectionately known as *The Grid* by boys. They had some right to christen it, for it was really run for their benefit, and they could almost claim it as their train, although other people were granted admittance to it.

The Grid was not included in any public timetable, but for some 15 years prior to the last war it provided a service between Twickenham (Middlesex) and Hampton for the boys of Hampton Grammar School. It was remarkable in being steam operated in the Southern

Electric suburban area, and at the time when the photograph was taken it was practically the last Southern steam-worked local passenger service in the London district.

The story of *The Grid* was ably told some years ago by Mr. R. E. Tustin in the *Railway Observer*, and many of the details that appear here have been taken from his account. It seems that the



The *Grid*, a former Southern steam-worked school special, the story of which is told in this article. Photograph by J. Tyrrell, Walton-on-Thames.

continued operation of the train by steam, over lines regularly carrying Southern Electric trains, was due to the fact that an engine had to come from Twickenham each day to carry out yard shunting at Hampton. It was therefore easily possible for this engine to take a set of coaches up in the morning and back again later in the day, and to fit in a mid-day trip as well. To have used an electric train set for this passenger working at the times required might have upset the highly complex rostering of these units. In any case all the electrics available were invariably needed for London rush-hour services in the morning and the evening.

Over the years the method of working varied, and the engines and stock employed for *The Grid* also changed. During the early and the later period of its running the engine was invariably a Drummond 0-4-4 tank as seen in our photograph. In between, the engines ranged from an Adams Jubilee 0-4-2, or even one of the

same designer's large-wheeled 4-4-0s with their sturdy stride, to one of the massive Urie 4-6-2 or 4-8-0 tanks well known at Feltham Yard.

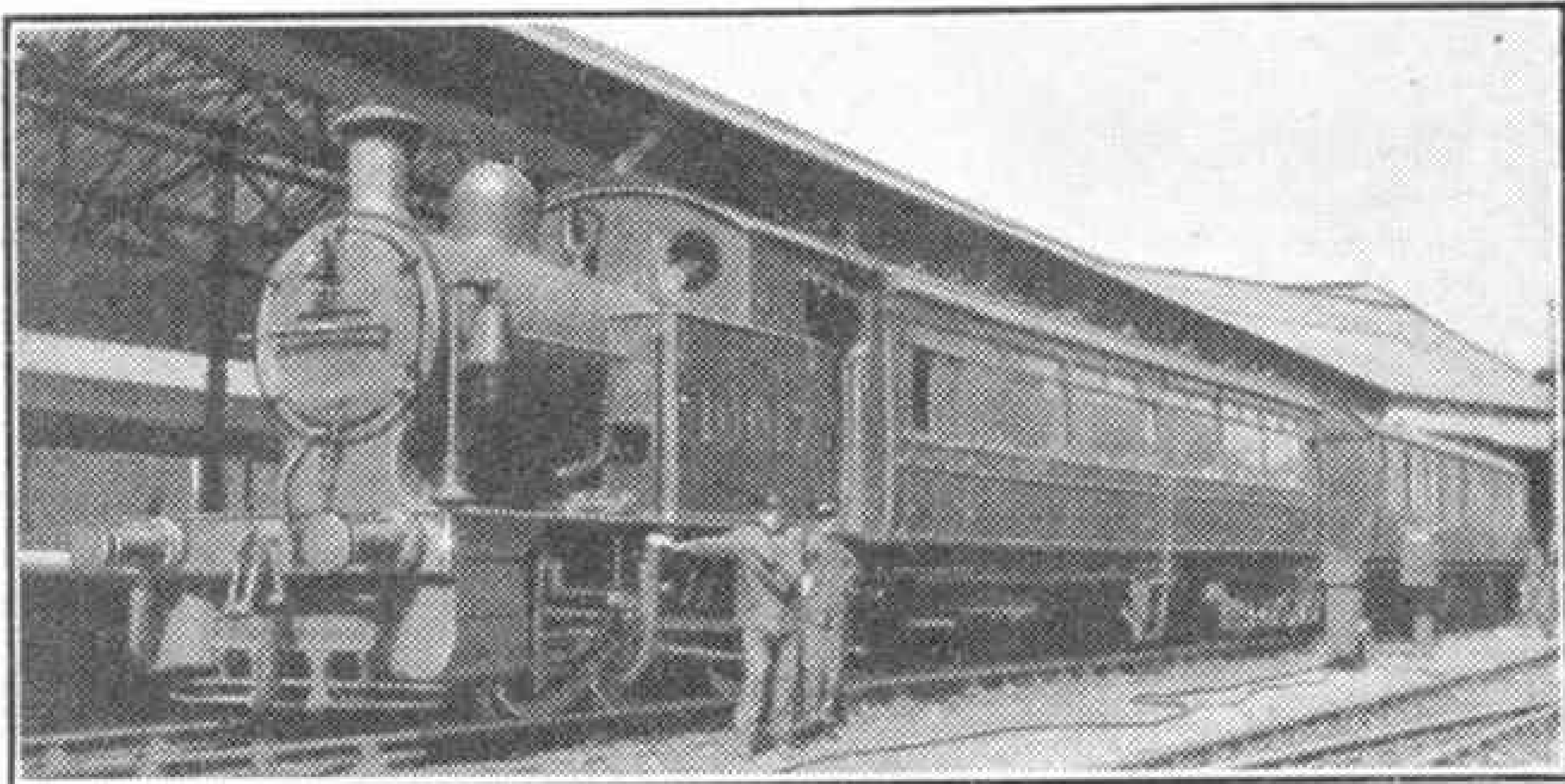
By the last few years of its operation *The Grid* had resolved itself from one, or sometimes two, four-coach suburban "block" sets of L.S.W.R. origin to a three-coach set of ex-Brighton vehicles, and it is thought that this is the make-up in our picture, which by the way, may be the only photograph of *The Grid* ever taken. When Hampton Yard was busy a relief engine, often an Adams 0-4-4T, would make the mid-day trip.

This unique train service ended when the school was removed to premises conveniently served by a near-by trolley bus route. Then no longer did *The Grid* convey its lively passengers to school and back, and the fun of breaking-up days, when streamers were attached to every possible projection and progress was punctuated by exploding fireworks, became only a memory.

How *The Grid* got its name we do not know, but we can explain that of the

district traversed by it is known locally as *Dolly Tub City*; hence the train title.

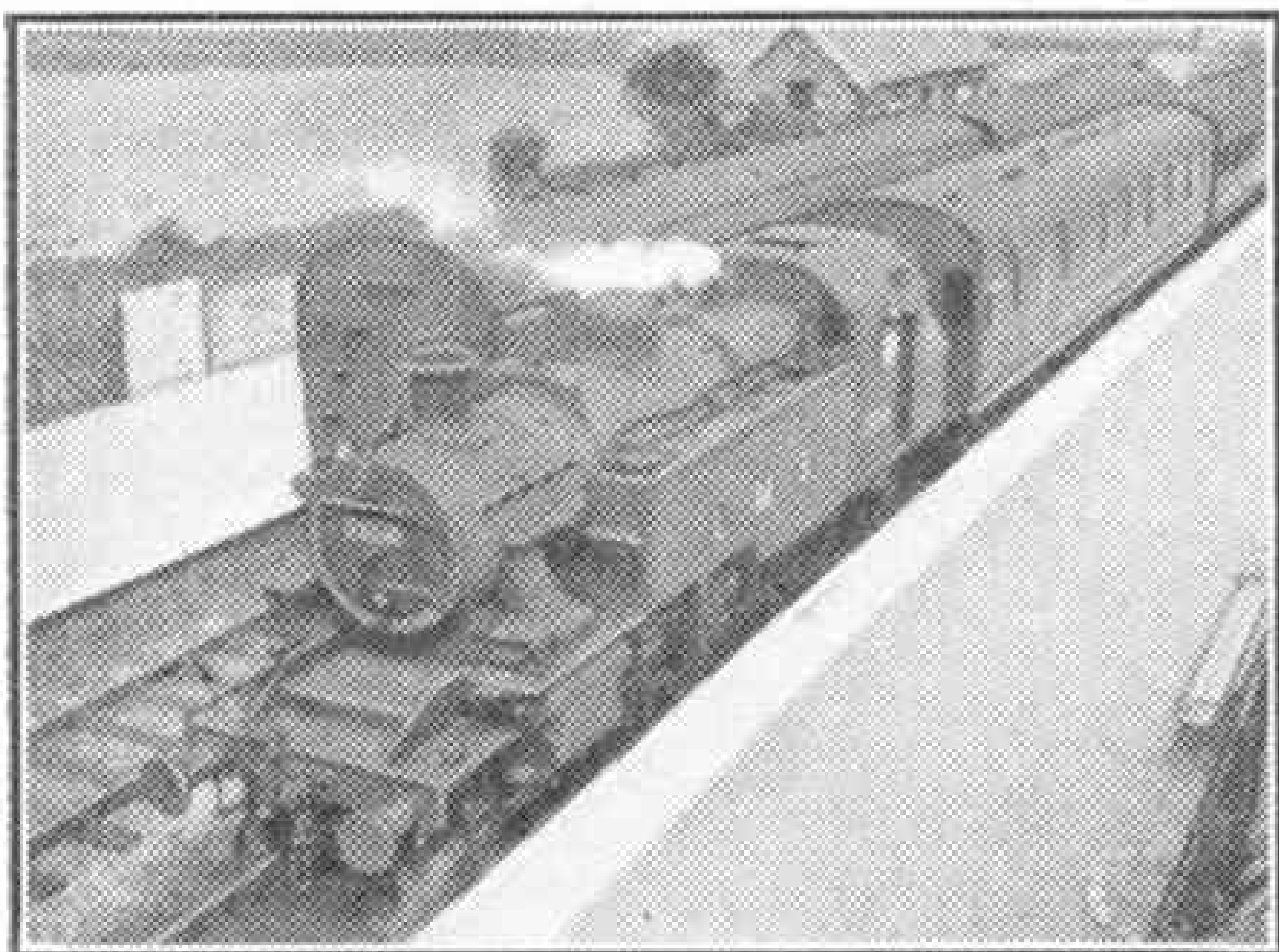
But the *Dolly Tub Express* was only one of its names. Others were *Radcliffe Billy* and *Radcliffe Jack*, though these may have originated at different periods. The latter of these two names was due



The Dolly Tub Express, the last steam rail-motor unit of former L. and Y. origin, at Bolton. Photograph by Frank Mills, Kearsley, Nr. Bolton.

to the fact that a driver who handled the unit for years was named Jack. *Altcar Bob*, another variation, no doubt refers to the time when such cars ran in Liverpool, Southport and Ormskirk districts, for the cars that ran in the Wakefield and Blackpool districts do not seem to have acquired any special titles. The standard of running in the later years of one of the last two units in service seems to have brought yet another name, *The Jerk*, which requires no further explanation. The last of these engine-and-coach units was withdrawn in 1948.

The austerities of the stock used for a workmen's train from Redbridge to Doncaster account for the title of the *Cannibals' Train*. But mystery still surrounds the origin of *Bonnyface*, as the 4.25 p.m. from Hawes across to Garsdale on the London Midland line between Settle and Carlisle is known. It has been suggested by Mr. W. H. Foster, joint author of *The Story of the Settle-Carlisle Line* and an authority on the district, that to local permanent way and quarrymen its afternoon passing heralded the end of their working day. To them it was a bonny sight! Alternatively, as it was a popular train for farmers' wives and daughters returning from shopping expeditions on Hawes market day, the windows of the train would disclose a pleasing row of "bonny faces." But nobody, even on the line, really seems to know. Do you?



The mysterious Bonnyface, the 4.25 p.m. from Hawes. Photograph by A. N. Davenport, Epsom.

Dolly Tub Express. Some details of this have been given by Mr. Frank Mills, who sent us our photograph of it. The homely title was given to one of the steam car units of the former Lancashire and Yorkshire Railway when working between Horwich, Bolton and Radcliffe. A Bolton

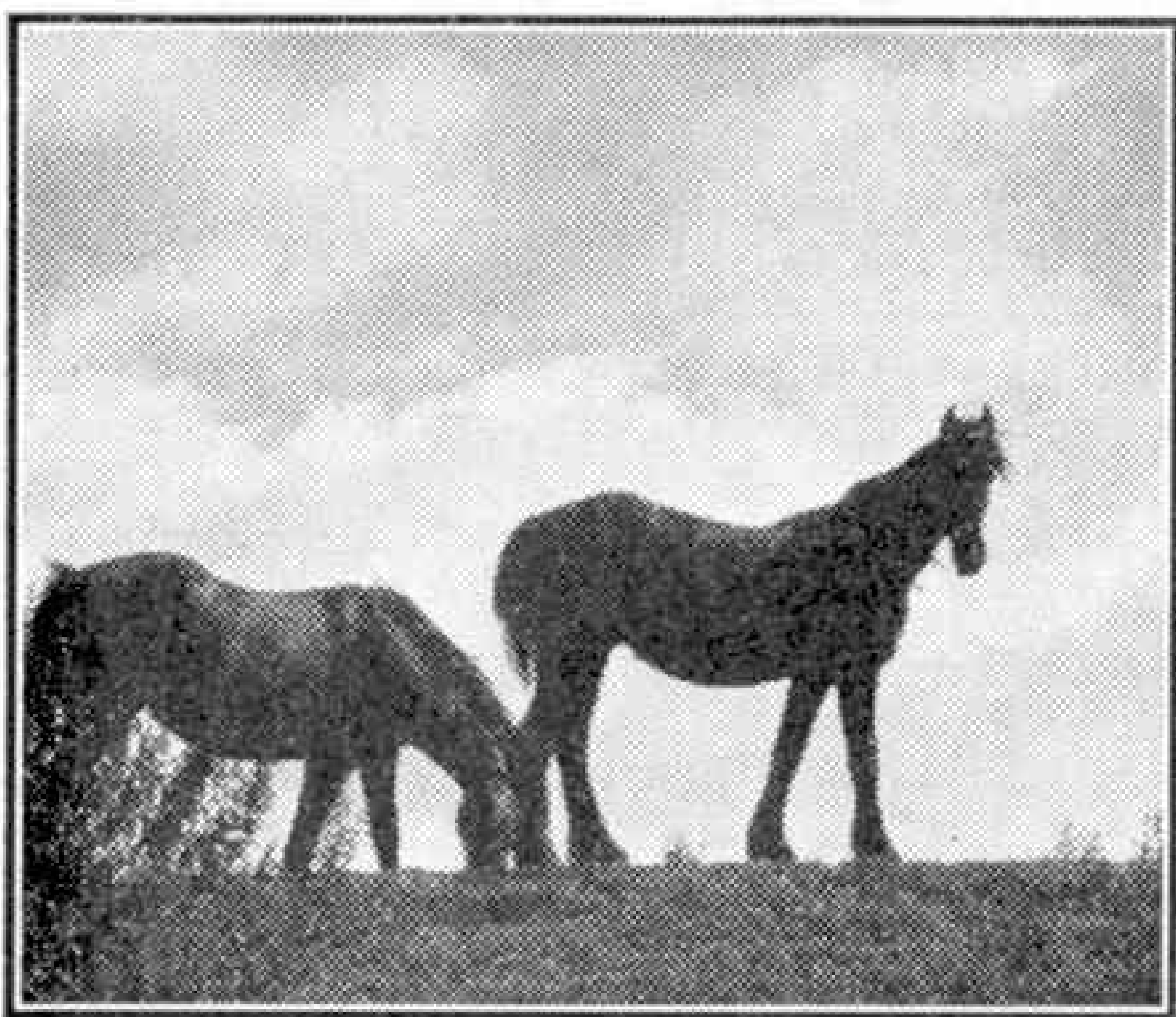
Photography

Silhouettes

By E. E. Steele

IT is repeatedly stressed in articles and books upon photography that good technical results can only be expected where sufficient exposure is given, under-exposure being responsible for faulty tones and lack of detail, resulting in poor prints devoid of quality. This is excellent advice for the general run of photography, where rich prints of full tonal scale are required, but deliberately shortening the tone-range by under-exposure can lead to very attractive results, being carried to its limits in what are called "silhouettes," with which everyone is familiar.

Portraits in profile can be made in this way if the



Horses outlined against the sky.

subject is arranged against a brightly lit background of light colour, and a very brief exposure is given, insufficient to show details; in effect a black outline against a white background. More interesting and variable pictures can be made by photographing suitable objects, people, buildings, trees, etc., against a sky background of brilliantly lit clouds as shown in the illustration on this page of oat stooks in the harvest field. This picture was made almost at sunset, and the exposure given was just sufficient to ensure a good rendering of the sky, the foreground being very much under-exposed so that the oats show as a pattern without detail.

By this method many subjects can be taken for their shape alone, without showing irritating details, often making for a more dramatic result than that obtained by correct exposure. If one is using a meter or calculator for determining the exposure, find the shortest exposure for the sky and clouds, and allow the rest to be very much under-exposed. This may mean very short exposures with the lens well stopped down, and the choice of a slow film is advised. It is of interest for users of box cameras to note that they can make pictures of this kind when the light is altogether too poor for normal shots.

Those living in towns can make



Silhouette of oat stooks. The illustrations to this article are from photographs by the author.

silhouettes of churches and buildings, some of the former being very attractive, such as the dome of St. Paul's, which I have seen treated as a silhouette more than once. Such pictures may be given normal developing technique, but a rather harder paper than that normally used may be an advantage if greater contrast is needed in printing. It is important, however, to expose the print so that the sky prints out well, and development of the print should not be curtailed as it is essential to get rich blacks, which cannot be had if the print is under-developed.

Silhouettes can be pasted on to thin wood, and then cut out with a fretsaw. With care some interesting and decorative results can be obtained.



Bound for adventure.



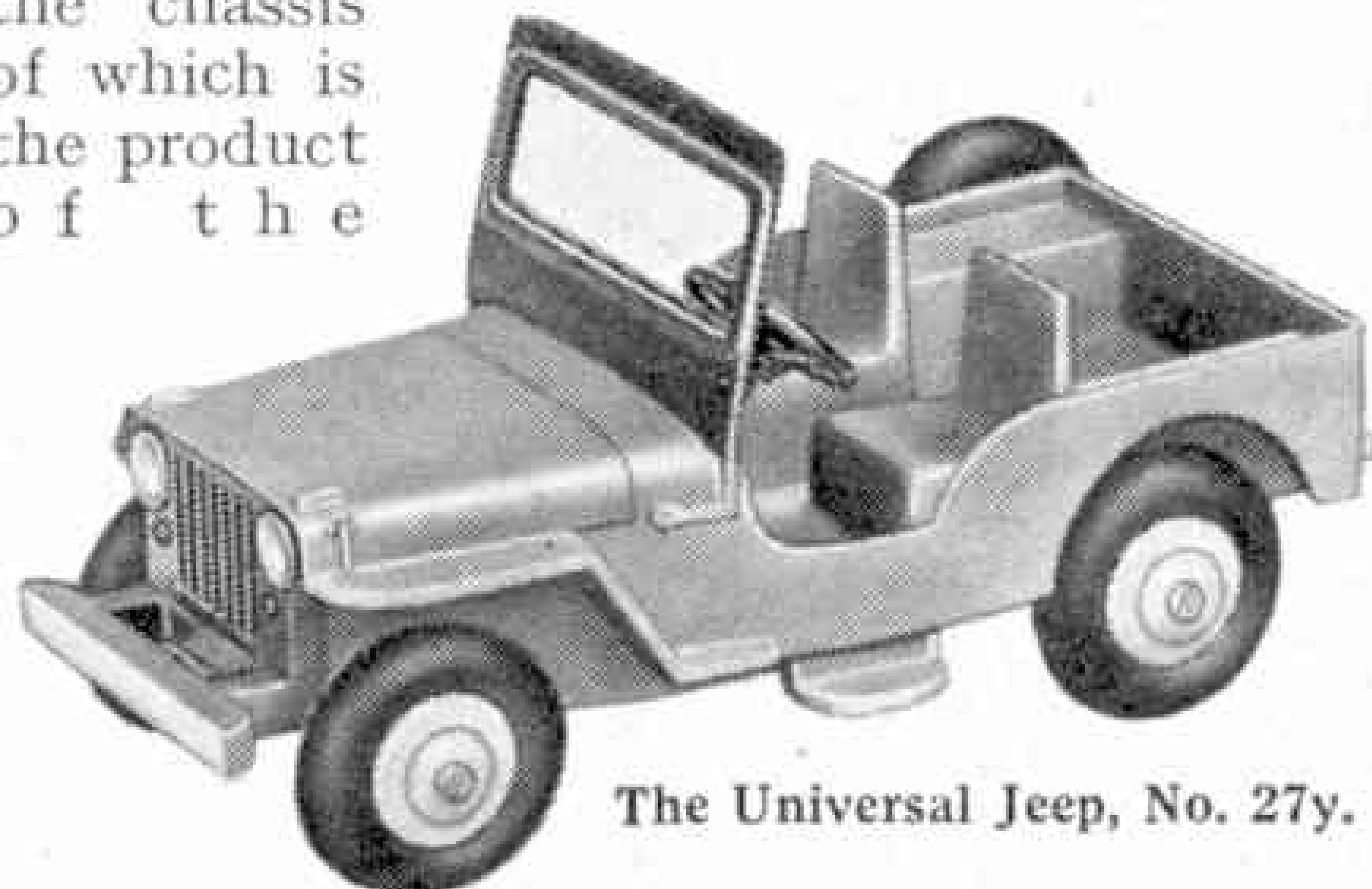
FINE NEW DINKY TOYS

Gems for Collectors

THE A.E.C. Tank Wagon shown in the picture on the right is a really splendid addition to the Dinky Toys series. It is a miniature of one that is used for carrying liquid chemicals manufactured by the Shell Company from crude oil, which nowadays yields an astonishing variety of valuable products in addition to such things as petrol, paraffin, and lubricating oils. It is a very fine reproduction of its original, the chassis of which is the product of the



A.E.C. Tanker, No. 591.



The Universal Jeep, No. 27y.

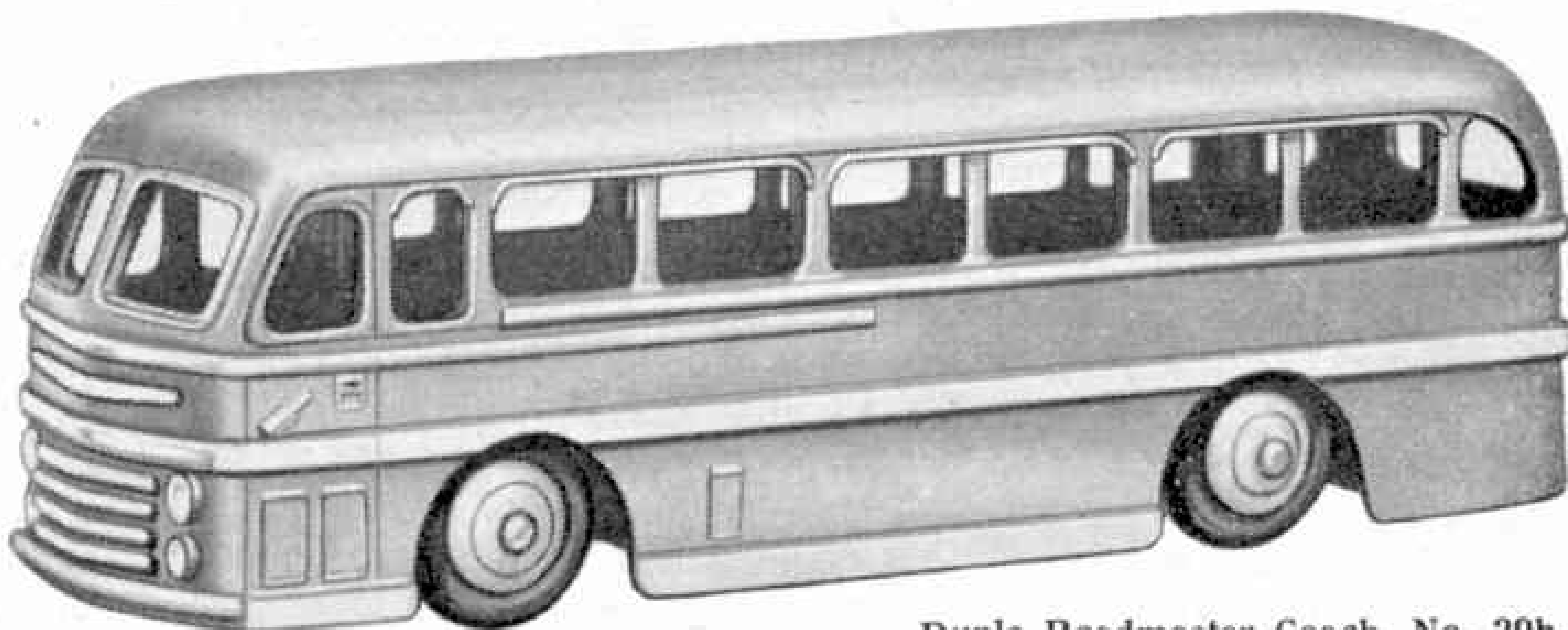
Associated Equipment Co. Ltd.

The general appearance of this new Dinky Toy is very striking. The cab and the bodywork are bright red in colour, while the tank top and the lettering are in yellow. On the back is a reproduction, also in bright yellow, of the well known shell that is the symbol of the famous oil company of that name.

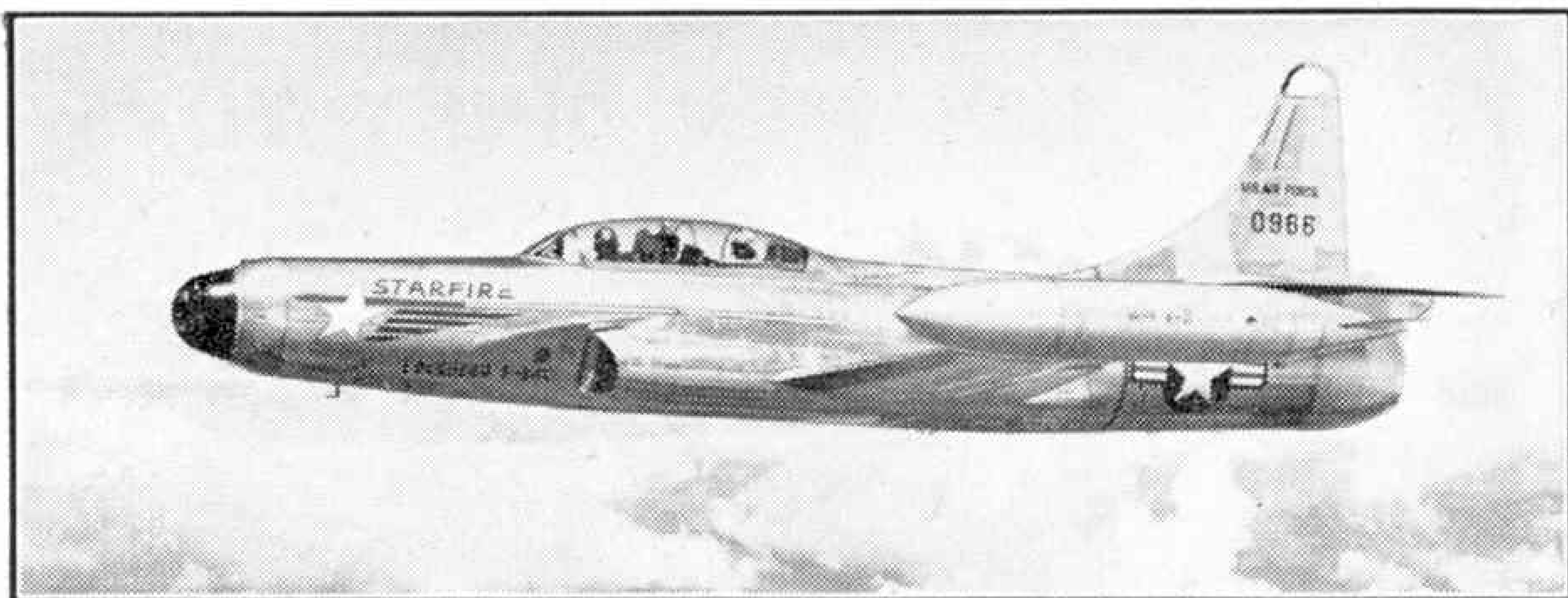
Along with this Dinky Toy, which made its appearance last month, enthusiasts were able to welcome

the handsome modern coach illustrated at the foot of the page, a miniature of the Duple Roadmaster Coach built by Duple Motor Bodies Ltd. It is available in two colours, a rich red and a fine blue, and the front grille and side flashings, which give it a distinguished appearance, are aluminium coloured. No Dinky Toys road layout, nor indeed any "collection" of Dinky Toys road vehicles whether for use "on the road" or not, should be without this splendid coach.

Little need be said nowadays about the Jeep, which became famous in wartime and continues to be a great favourite. Every reader of the *M.M.* knows all about it, and the version of the Universal Jeep that recently appeared in the Dinky Toys series instantly became popular. It has all the sturdiness associated with the real Jeep. It is made in two colours, red and green, and the strong high windscreen is black.



Duple Roadmaster Coach, No. 29h.



World's First Successful Robot Fighter

The 600 m.p.h. Lockheed Starfire

By John W. R. Taylor

SOME months ago an incredible story came from Korea about a Colonel of the U.S. Signal Corps who took off from an airfield near Seoul in a North American F-86D Sabre jet fighter, shot down a MIG-15 near the Yalu River and landed safely back at his base, despite the fact that he had never before sat at the controls of an aeroplane. The U.S. Air Force would neither confirm nor deny the report. So, although the U.S. Navy had already claimed that they could land high-speed aircraft automatically and without pilot assistance on the decks of their aircraft carriers, most people on this side of the Atlantic preferred to regard the whole story as one of those strange, half-legendary tales that wartime secrecy so often produces.

Now the U.S.A.F. have released details of a fantastic new fighter, the 600 m.p.h. Lockheed F-94C Starfire, which makes the Korean Sabre story seem commonplace.

The Starfire carries a crew of two; but, except during take-off and landing, the pilot goes along just for a ride. Once in the air, at operational height, he hands over control of the fighter to G.C.I. (Ground Controlled Interception) radar, which guides it in the general direction of the enemy bomber. Automatic tracking radar in the black nose dome then takes over, brings the fighter within range of its prey

and fires rockets to destroy the enemy.

The Starfire is thus the world's first successful robot fighter and the first to be armed solely with air-to-air rockets. The fact that it is flown by radar means that it can operate by day or night in all weathers, even when its pilot has no hope of seeing the target visually.

The Germans worked on a somewhat similar project towards the end of World War II. Their Natter was a tiny piloted, rocket-powered interceptor, intended to be shot off vertically from a ramp to a height of 37,000 ft. in one minute. The

flight was to be radar controlled except for the last few hundred yards, when the pilot was to take over, aim and fire a salvo of rockets contained in the aircraft's nose. The Natter was faster-climbing than a Starfire and cheaper and easier to build. But it was a fair weather fighter, relying for success on the

pilot being able to see and aim at his target; and after each attack he had to jump out by parachute, leaving the aircraft to crash, except for its engine which was supposed to come down at the end of another parachute. Fortunately, the Natter was so far before its time that the Germans were unable to make it work, and on the only occasion when it was launched with a pilot, it destroyed itself immediately after take-off.

The Starfire, on the other hand, is a

The photograph at the head of page shows the Lockheed F-94C Starfire, the world's first successful robot fighter aircraft, now in production for the U.S. Air Force. The illustrations to this article are reproduced by courtesy of the Lockheed Aircraft Corporation, U.S.A.

much-improved development of our old friend the F-80 Shooting Star, and its basic design is thus already well-proven. Its wings are similar in shape to those of the F-80, but stronger and thinner

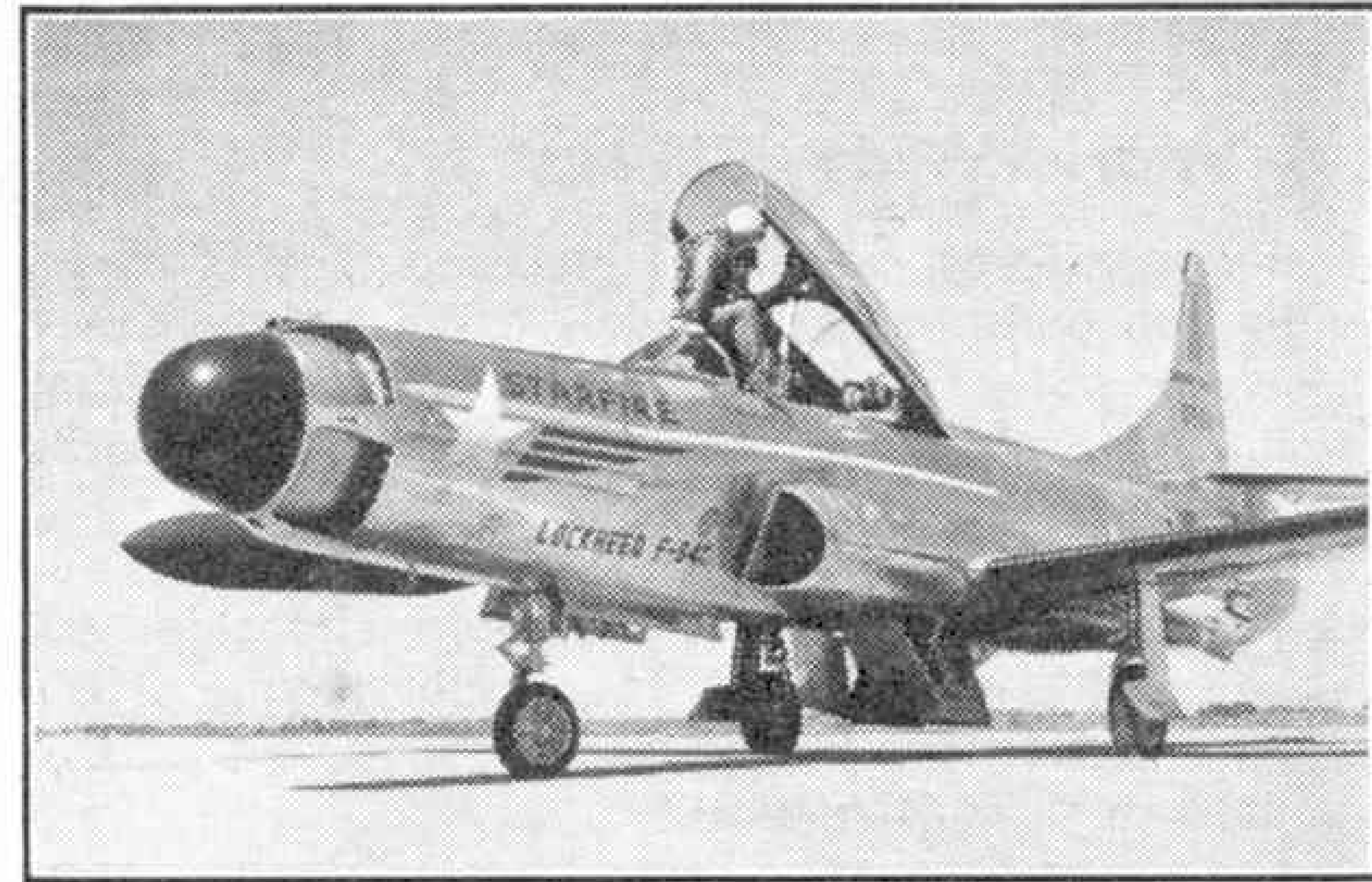
fuselage to steady the aircraft and keep its speed within safe limits in a dive attack.

More than half a ton of radio and radar is carried, and although the 24 nose rockets form the Starfire's main armament, it can also carry rocket "pods," 1,000 lb. bombs or napalm tanks under its wings.

The result is a highly formidable warplane able to cope effectively with almost any bombing attack that could conceivably be made on America within the next year or two. It represents a tremendous advance on fighters already in service, both in automatic guidance to the target and in armament. But the U.S.A.F. plan to follow it up as soon as possible with the faster,

quicker-climbing Convair XF-102 and other advanced Lockheed and Republic types.

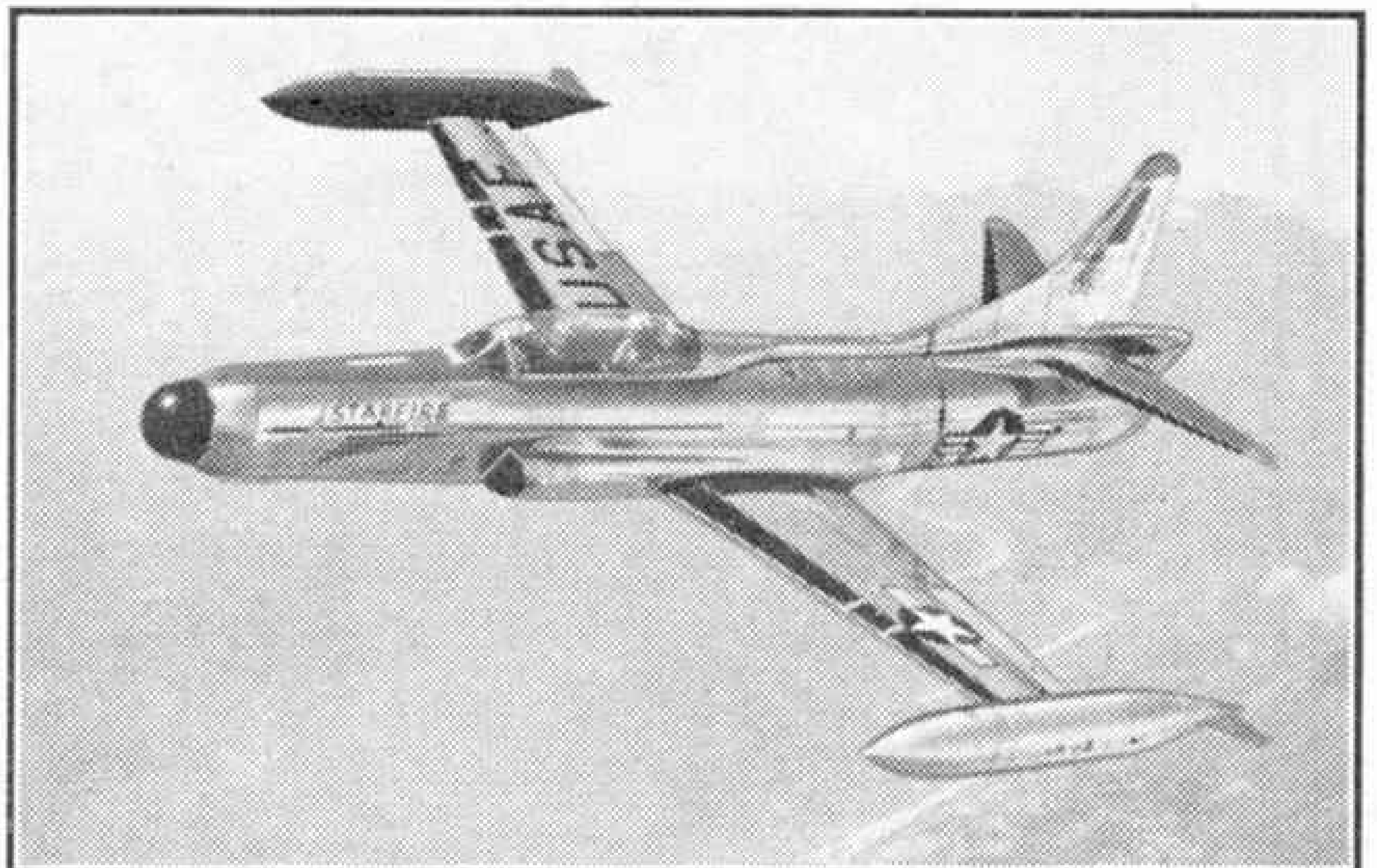
These may well be the last piloted fighters we shall ever see, for the qualities which make the Starfire so outstanding have converted it almost into the category of a guided missile. Once automatic take-off and landing techniques have been perfected, there will be little further need for human pilots.



The round black nose houses the radar apparatus. In the photograph the rocket doors just behind the nose are open to reveal the rocket firing tubes, but in actual flight these retractable doors snap open only for an instant during firing.

in section for higher speeds, and it has a new, sweptback tailplane. Just behind its nose radar is a ring of 24 tubes containing the battery of 2.75 in. Mighty Mouse rockets, covered by retractable doors which snap inwards just before the rockets are fired. Then comes the cockpit, with tandem ejector seats for the pilot and radar observer, and, to each side, new-type air intakes which stand out clear of the fuselage.

The rear fuselage is bigger than that of the F-80, and contains a Pratt and Whitney-built Rolls-Royce Tay engine, developing 6,250 lb. thrust even without the extra power of an afterburner which is fitted in the tail-pipe. The projection under the rudder houses a tail parachute-brake to shorten the aircraft's landing run, and there are retractable dive brakes beneath the centre section and on each side of the rear



Another flying view of this remarkable robot rocket fighter, showing the straight-wing design and sweptback tailplane.

MECCANO

MO

A World-Wide Contest

With the object of encouraging owners of Meccano Outfits to try their skill in designing and building new models based on their own ideas, Meccano Ltd. have organised a great International Model-Building Competition in which Cash Prizes to a total value of £1,000 are to be awarded for the best models submitted.

The Competition is open to every owner of a Meccano Outfit, and there is no Entrance Fee. All the competitor has to do is to think out a new model, and then build it in Meccano. The model may be of any subject, and there are no restrictions on the size of Meccano Outfit or the number of parts used in its construction.

Entries may be sent in at any time up to 31st March 1953, the closing date in this world-wide Competition.

Actual models must *not* be sent in by entrants in this great Contest. Instead, good photographs or sketches should be prepared and sent in along with a brief description of the model.

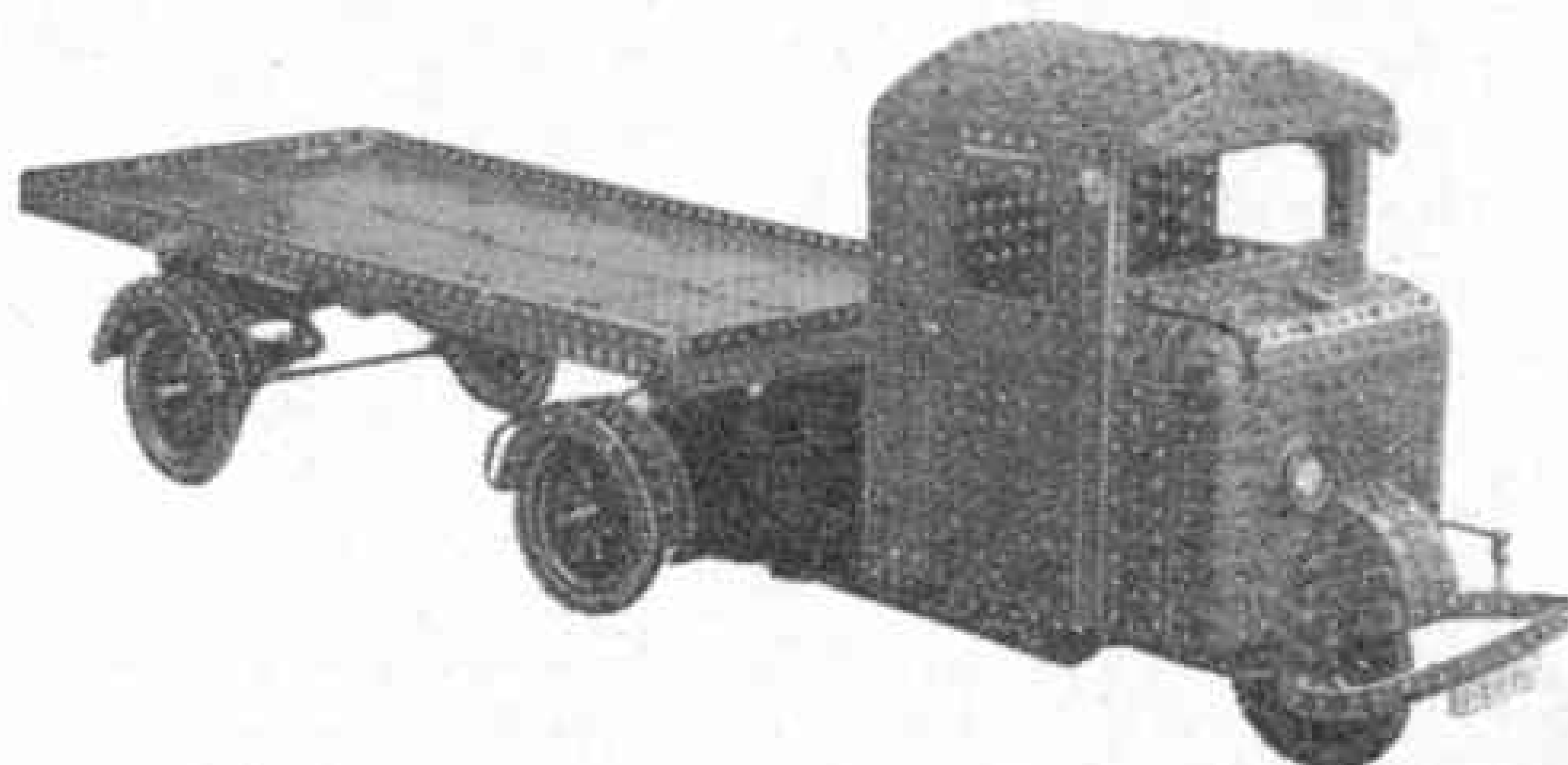
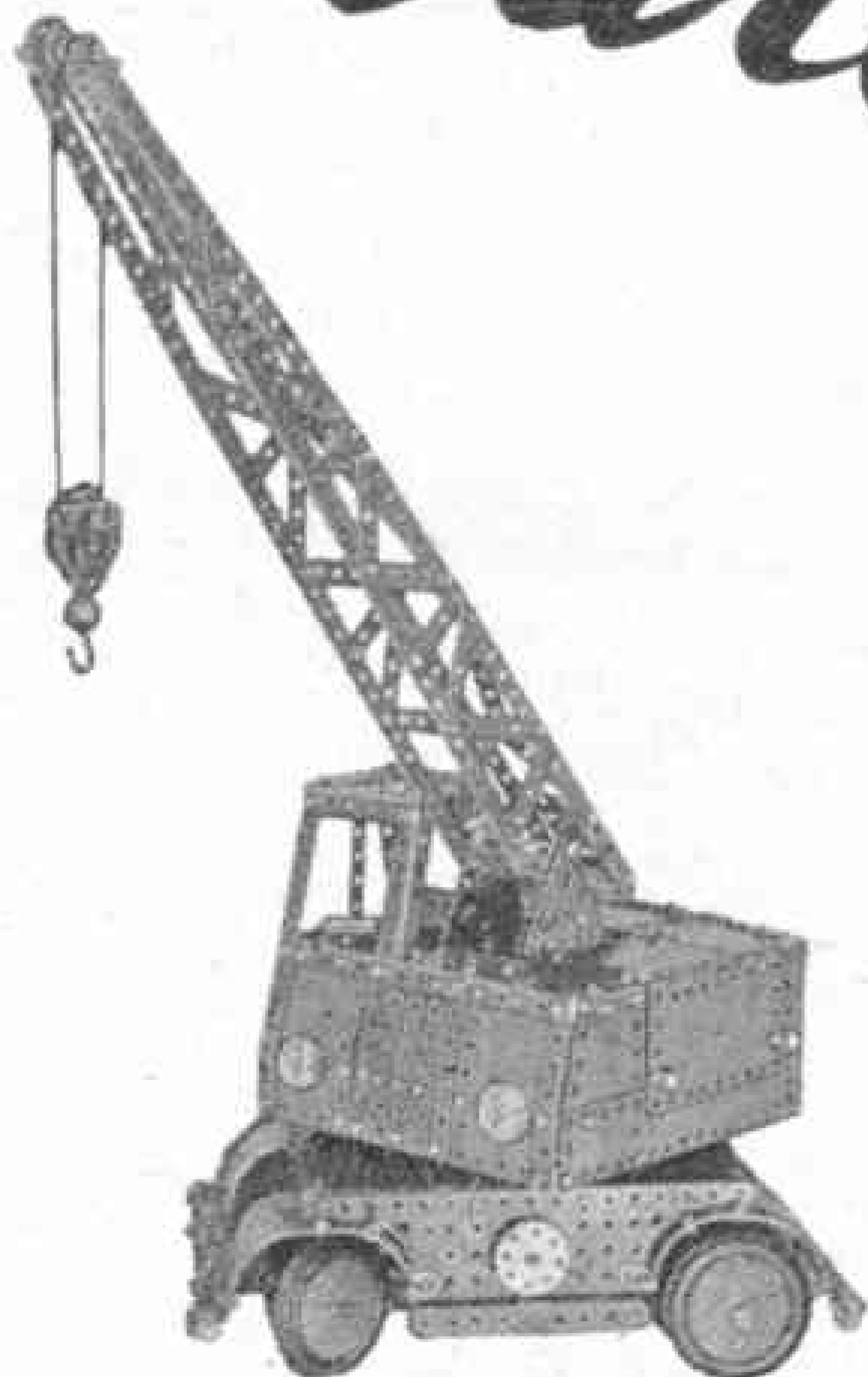
In order to give every model-builder a fair chance, the Competition is divided into three Sections as follows:

Section A—For Competitors who will be not more than 10 years of age on 31st March 1953.

Section B—For competitors who will be between 10 and 16 years of age on 31st March 1953.

Section C—For competitors who will be 16 years of age or over on 31st March 1953.

Start building



MODEL-BUILDING COMPETITION

THE PRIZES

SECTION A

(competitors not more than 10 years of age on 31st March 1953)

First Prize	£30
Second Prize	£15
Third Prize	£10
Fourth Prize	£5
50 Prizes each of ..	£2
100 Prizes each of ..	£1

SECTION B

(competitors between 10 and 16 years of age on 31st March 1953)

First Prize	£50
Second Prize	£25
Third Prize	£15
Fourth Prize	£10
20 Prizes each of ..	£5
50 Prizes each of ..	£2
60 Prizes each of ..	£1

SECTION C

(competitors 16 years of age or over on 31st March 1953)

First Prize	£50
Second Prize	£25
Third Prize	£15
Fourth Prize	£10
20 Prizes each of ..	£5
50 Prizes each of ..	£2
60 Prizes each of ..	£1

A separate set of Special Prizes will be awarded for models built collectively by members of Meccano Clubs and sent in as official Club Entries. These Prizes are as follows:

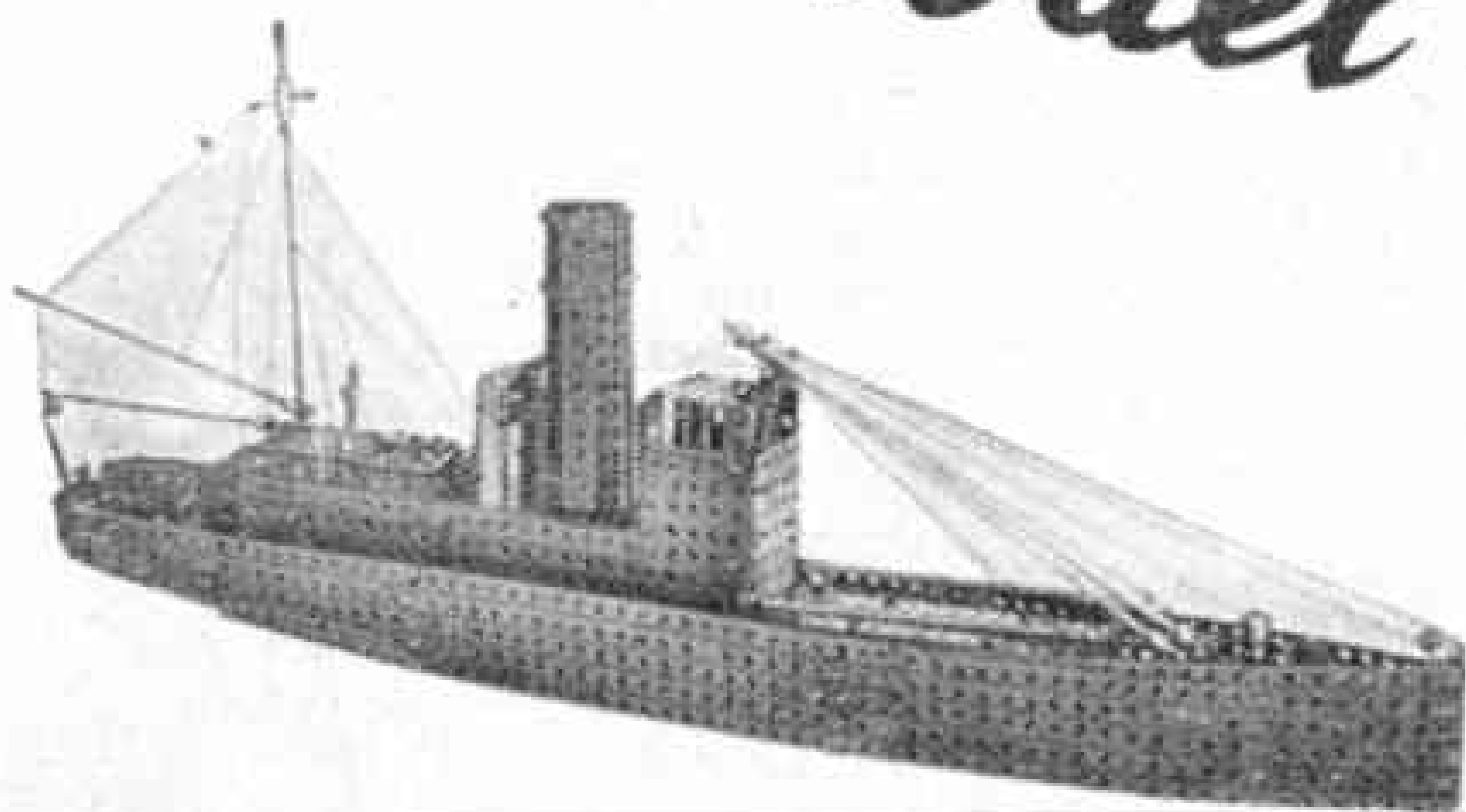
First Prize .. £10 Second Prize .. £5 Third Prize .. £3 10 Prizes each of £1

Get this special folder from your dealer

Full details of this Competition, with directions for preparing and sending in entries, are given in a special folder. Ask your dealer for a copy, or write for one to Information Service, Meccano Limited, Binns Road, Liverpool 13.

★ £1000 in Cash Prizes

your model now



Railway Notes

By R. A. H. Weight

Locomotive and Wagon Building Plans

I am informed that the 1953 locomotive building programme for British Railways proposes the construction of 30 class 9 freight 2-10-0 engines of a new type Nos. 92000-29, some of which are intended to run on the Western and Southern Regions. Standard classes to be multiplied include 10 more Britannia class 4-6-2s Nos. 70045-54; 25 class 5 4-6-0s Nos. 73050-74; 30 class 4 4-6-0s: 75050-79. Further batches of 2-6-0s are based on the L.M.R. designs in power classes 4, 3 (a new variant) and 2, carrying numbers in the 76xxx, 77xxx, and 78xxx series respectively. Of 47 class 4 2-6-4Ts Nos. 80069-80115, the last 10 are to be built at Doncaster, the others at Brighton; and 10 more class 3 2-6-2Ts starting at 82055 are to be put in hand at Swindon, as well as some class 2 2-6-2Ts carrying 84xxx numbers.

The current programme, which is partly in hand now, includes a number of similar locomotives, such as the 20 Britannia class Pacifics in the series 70025-44 intended to bear some grand old names. Some of those engines are nearing completion at Crewe. In addition to the 237 steam locomotives mentioned in the 1953 programme, provision is made for 57 more diesel-electric shunting engines, Nos. 13025-81, together with 12 small diesel-mechanical ones to be ordered from contractors that will fall into the 11xxx series.

Among the wagons on order, some detail of which has already been given in a previous issue, are two giants 92 ft. long for the conveyance of heavy electrical machinery; they have 24 wheels and are capable of carrying a concentrated load of up to 135 tons. Mechanism will be provided to permit such vast pieces to be moved to either side of the wagon in order to clear fixed structures, such as bridges, signal posts, which might otherwise be in the way along the route. Head, Wrightson and Co. Ltd., of Thornaby-on-Tees, are the contractors.

"Tommy" Makes his Bow

No. 26000, the pioneer electric locomotive for the Sheffield-Manchester section, was on loan from 1947 to 1952 to the Netherlands Railways, on which it covered 330,000 miles and rendered very good service on express passenger and heavy mineral trains. Commemorating the name bestowed on it by the drivers in Holland, and as a token of the friendly co-operation displayed by the Netherlands Railways, the President of that organisation recently unveiled the nameplates *Tommy* during a short ceremony at Liverpool Street Station.

King's Cross Centenary Exhibition

A Centenary Exhibition of rolling stock with a section for models and small exhibits, covering the period 1852-1952, will be held at King's Cross from Monday 13th October to Saturday 18th October inclusive.

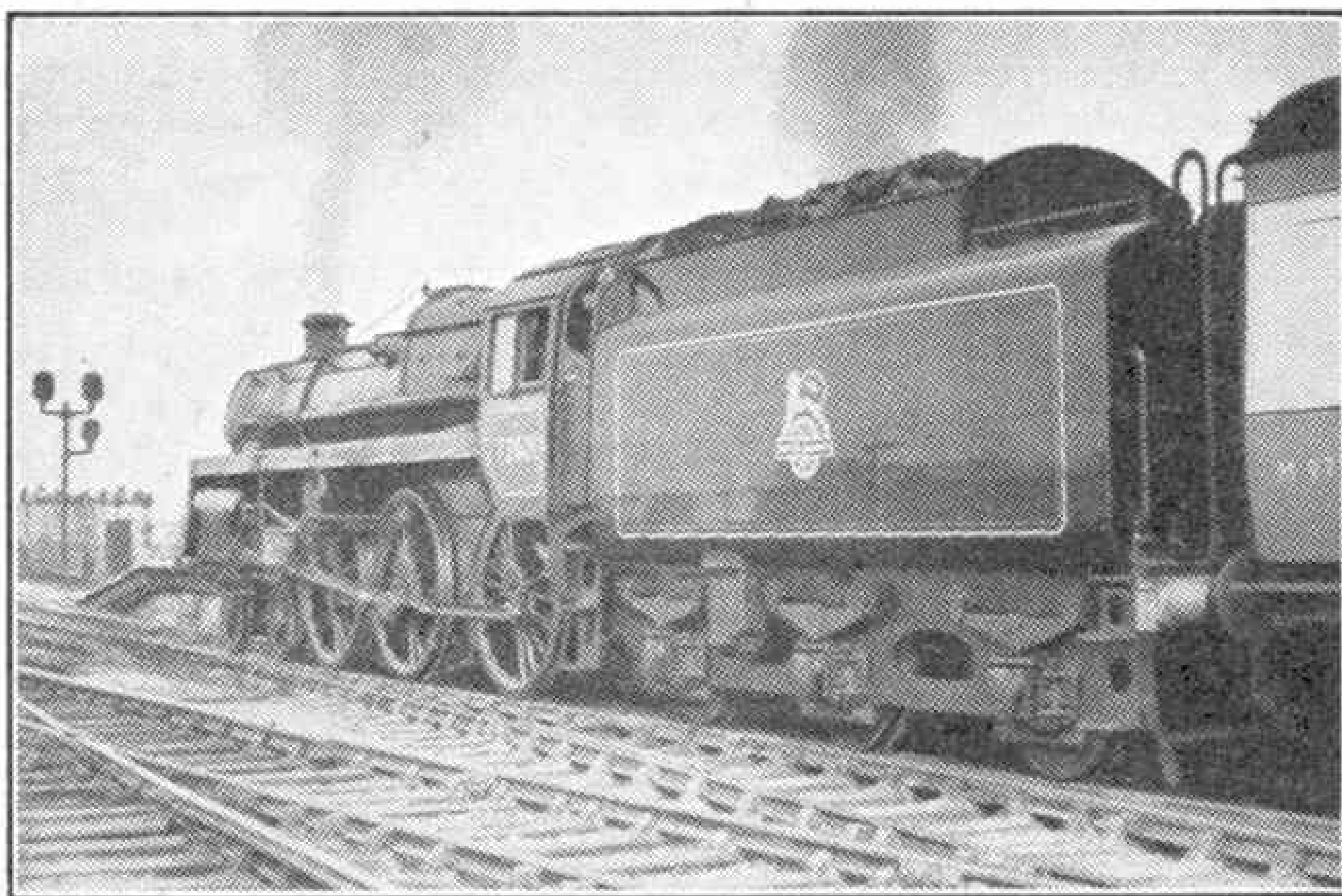
London Midland News

As Nos. 40728 and 40743 have been withdrawn, there is at the time of writing one solitary survivor on the active service list of the well-known Midland class 3 Belpaire 4-4-0s, No. 40726. The Stephenson Locomotive Society, in conjunction with the Manchester Locomotive Society, arranged a special tour from Manchester, Chinley and Sheffield to Hull, to be hauled as far as Cudworth by one of these class 3 4-4-0s and thence with an ex-N.E.R. class R (now D20) 4-4-0 engine over the metals of the former Hull and Barnsley Railway, unused by regular through passenger services since 1932.

The erstwhile "Turbomotive," No. 46202, which was long in a dismantled condition at Crewe, has been reconstructed as a normal 4-cyl. 4-6-2 named *Princess Anne*, with curved nameplates fitted above the leading driving wheels. It resembles a *Princess Royal*, but has the outside steam pipe casings as on the Coronation 4-6-2s.

The Royal Train left Euston on August 7th last in charge of 4-6-2 No. 46229 *Duchess of Hamilton*, bound for Aberdeen and Ballater, the station for Balmoral.

Compound 4-4-0 No. 41167 hauled an excursion through from Northampton to Brighton and back. It was believed to be the first occasion on which an



B.R. standard class 5 4-6-0 No. 73001 gets away from Bristol (Temple Meads) with the 5 p.m. for York. Photograph by J. D. Mills, Liverpool.

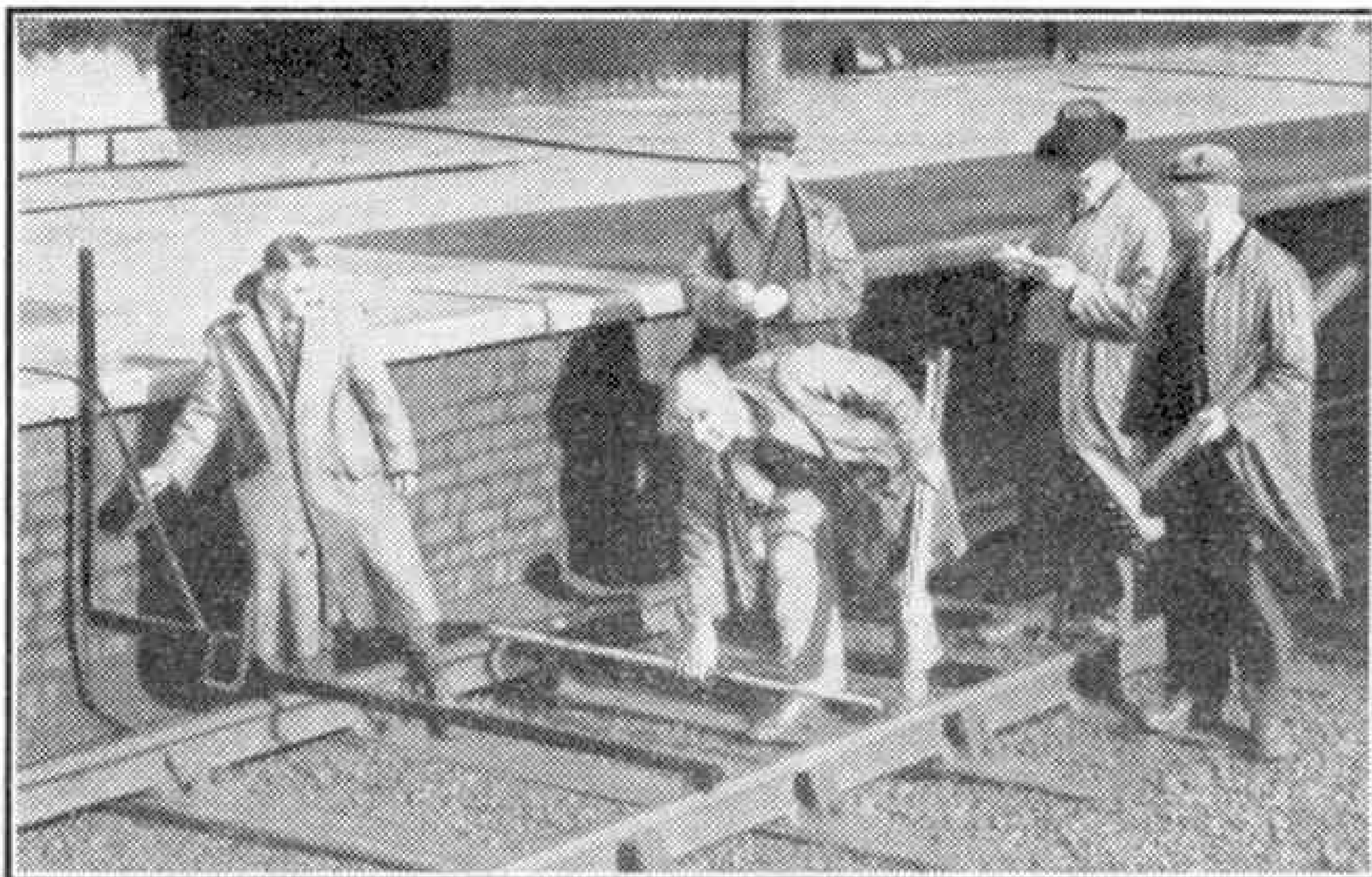
engine of this type had worked a main line train over the Southern system, at any rate through Surrey and Sussex. Class 5 4-6-0s have again been to Brighton on several occasions, while in the north-east they or Jubilees have been noted on special trains at the former L.N.E.R. stations in Scarborough, Bridlington, Stockton and Newcastle. Various other interesting holiday workings have been reported, together with many long runs and mileages, this applying also to other Regions.

Western Tidings

Class 3 2-6-2Ts of B.R. standard type Nos. 82000-9 are allocated to 84E, Tyseley, Birmingham. Nos. 82010 up to 82019 are following from Swindon Works for Southern use and several have arrived in the Exeter district, 72A. A further series is on order.

Large 0-6-0 pannier tanks built by contract have been delivered. They are Nos. 8478-9, 8483-6, and 9473-6. Several have begun work in South Wales.

Two Saint 4-6-0s withdrawn are No. 2934 *Butleigh Court* and No. 2951 *Tawstock Court*. The last available figures show 13 Star 4-cyl. and 10 Saint 2-cyl. 4-6-0s remaining on the active list.



An interesting picture of a little-known railway routine task. The gang are checking the position of the track in relation to the platform. Photograph by W. S. Garth, Tyldesley, Manchester.

No. 6988 *Swithland Hall* has been observed with a new self-weighing tender, allowing accurate measurements to be taken of coal consumption.

Southall Motive Power Depot has been reconstructed and extended.

Electric Expresses from Paris to Lyons

The extension of the overhead electrification on the former P.L.M. tracks, the French main line route from Paris through Laroche, Dijon and Macon to Lyons, has been completed rapidly over the whole distance of 318 miles. This is a busy trunk route connecting the capital with the south of France, and providing through services to Switzerland and Italy. High speeds are run, with averages exceeding 70 m.p.h. in some instances, while train weights may be as much as 600-800 tons. Large electric locomotives develop up to 4,800 h.p. Hydro-electric power is available for the generation of about half the current needed.

Southern Observations and Travels

On an August Saturday this year, all five Atlantics of class H2, Nos. 32421-2 and 32424-6, named respectively *South Foreland*, *North Foreland*, *Beachy Head*, *Trevoose Head* and *St. Albans Head*, worked from Brighton or Eastbourne with through Midlands trains by way of the West London connecting line to Kensington (Olympia) and Willesden Junction. The following week *Beachy Head* hauled special main line empty trains to and from Hastings. A relief train of nine coaches bound for Wolverhampton ran from Eastbourne to Brighton, 24½ miles, including the 1 in 88 climb of Falmer bank headed by 4-6-2 No. 34046 *Braunton* tender first!

I timed a brilliant performance by Schools 4-4-0 No. 30900 *Eton* over the same course but starting from Polegate, the Junction outside Eastbourne, with 11 on, nearly all W.R. stock, when the difficult schedule was improved upon. A maximum of 69 m.p.h. near Glynde was followed by a signal check and the usual cautious passage of Lewes curves, junctions and station, after which Falmer

summit was breasted at 36 m.p.h., over 10 m.p.h. quicker than I had recorded there with a heavy load before. This steep incline follows immediately after the severe service slack through Lewes. Shortly before, with a similar load, new 2-6-4T No. 80042 ascended at 22-22½ m.p.h. Engines of this and the similar L.M.R. class 4 type haul a good many of the through summer trains along the Sussex coast.

Q1 and C class 0-6-0s were pressed into service for passenger haulage between Hastings, Eastbourne, Tonbridge and Ashford on busy days in August, as were a number of 2-6-0s of various classes for duties on the main routes of the Western, Central and Eastern divisions.

Large Pacific No. 35018 *British India Line* was recently provided with a 6,000 gal. tender fitted for coal weighing; Nos. 35026 *Lamport & Holt Line* and 35029 *Ellerman Lines*, which work mainly on Victoria-Dover boat expresses, have 5,000 gal. tenders. The two standard Britannia class 4-6-2s Nos. 70004 *William Shakespeare* and No. 70014 *Iron Duke*, on loan, continued fairly regular work on the *Golden Arrow* or other principal Continental trains.

Travelling by ordinary and holiday fast trains on the Charing Cross-Folkestone main line, I logged a speedy effort with light load on the 7.15 p.m. down from London, meanwhile enjoying an excellent dinner. Light Pacific No. 34086 *219 Squadron* was driven very carefully, but passed Knockholt summit at 55 and Dunton Green at 72 m.p.h. There was no high speed on the descent to Tonbridge owing to a permanent way slowing, but thereafter as far as Headcorn, where an easing occurred owing to our being early, we were running at between 66 and 78 m.p.h., reaching Ashford in 63½ min. from Waterloo (Eastern). A King Arthur with two coaches forming the Deal portion, detached at Ashford from the through Birkenhead service, whisked us along to Folkestone.



A Southern electric locomotive with a Pullman race special of nine cars approaching Epsom Downs. Photograph by H. M. Madgwick, Worthing.



Club and Branch News



WITH THE SECRETARY

BUILD UP THE MEMBERSHIP

Here we are at the beginning of the first Session of another Winter with, in every Club I have no doubt, an attractive programme of indoor activities waiting to be carried out. The enjoyment of any good thing is doubled if shared with others having the same interest, and that is one excellent reason for getting busy right now and recruiting as many new members as possible, so that they too can take part in the thrill and fun of Club life. Any Club aspiring to be successful must continually introduce new blood in the form of younger members. Recruits of the right kind are of great value, and with the experience they gain they make first-rate officials when they grow up.

MERIT MEDALLIONS

Now that the Summer Sessions are over Leaders will be able to look back over their Clubs' activities during the last two quarterly periods, and to decide whom to nominate for the award of Merit Medallions in recognition of general and sustained good work on behalf of the Guild and the Club. Two of these awards are available in each Session for each affiliated Meccano Club. Leaders should send in their nominations immediately, indicating just what kind of activity the members concerned have followed.

It may seem to some Leaders that the numerous outdoor activities that make up the Summer programme do not provide the same scope for members to earn this award as do the regular indoor meetings of the Winter months. But such things as the expression of a true team spirit, ever readiness to give a helping hand, bringing in new members, or suggesting new schemes of interest, are as applicable to the Summer as to the Winter sessions.

BRANCH EXHIBITION

The MILE END (PORTSMOUTH) H.R.C. Branch will hold its first Exhibition on Wednesday, 15th October, in the Buckland Methodist Church Hall, Beeston Street, from 6 p.m. to 9.30 p.m. Admission: Adults, 6d. Children, 3d. There will be a scenic Hornby-Dublo display and a large Hornby Gauge 0 clockwork layout.

PROPOSED CLUBS

DUBLIN—Mr. N. Jones, 21, Westbourne Road, Terenure, Dublin, Irish Republic.

GUISELEY—Mr. G. W. Aves, 10, Oxford Road, Guiseley, Nr. Leeds.

CLUB NOTES

ST. GEORGE'S (GATESHEAD) M.C.—An enjoyable Summer programme has included weekly Cricket Matches, and on Saturdays, Cycle Runs when members have taken their meals with them. A total of about 440 miles has been covered on these outings and many interesting places visited. Club

roll: 14. *Secretary*: A. H. England, 18, Joicey Road, Low Fell, Gateshead 9.

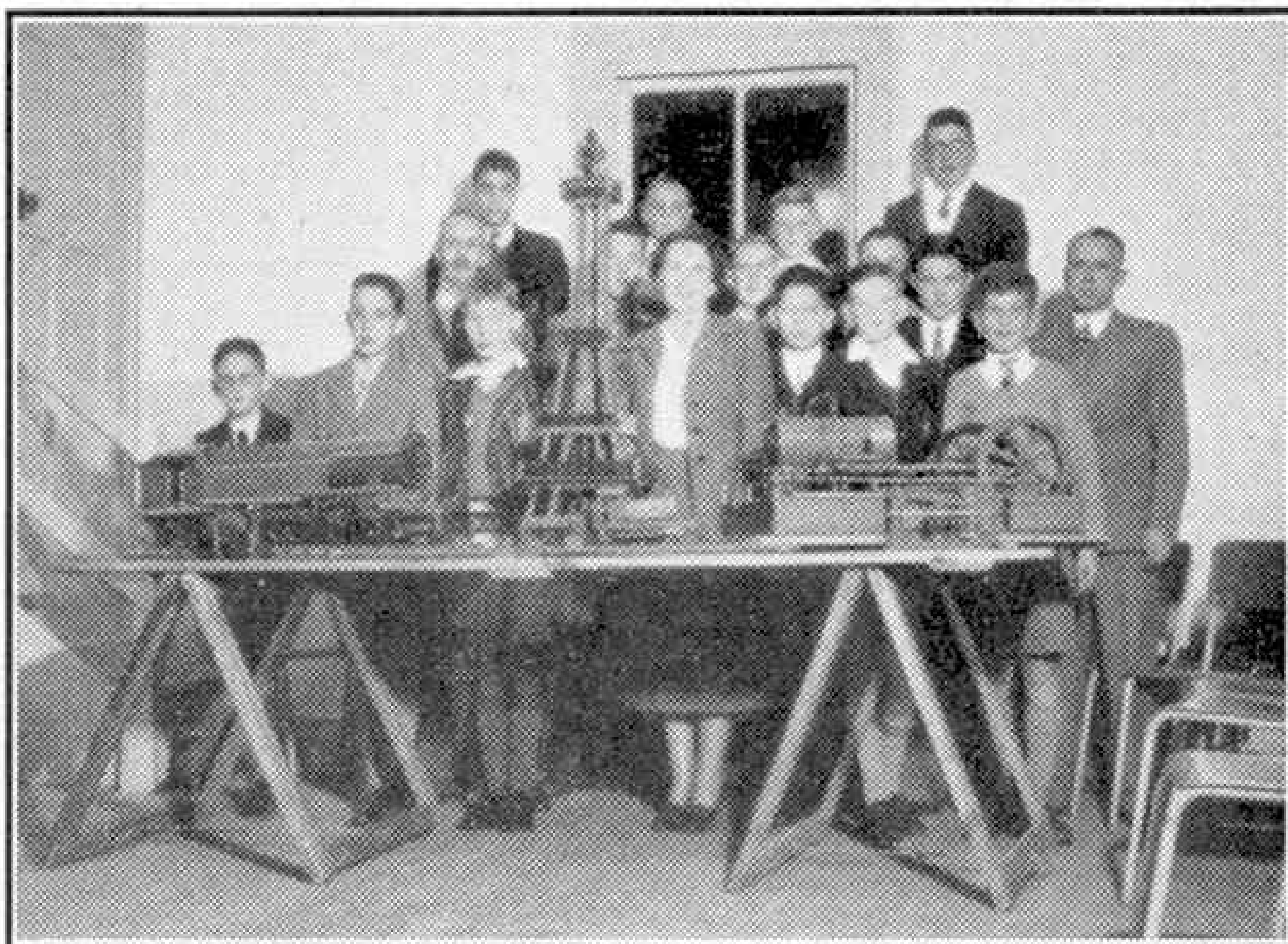
CRYPT GRAMMAR SCHOOL (GLOUCESTER) M.C.—A Motor Coach Trip to Avonmouth Docks was greatly enjoyed. On the occasion of the resignation of the Reverend G. W. Simpson as President, he was presented with a fountain pen bought from contributions by the members in appreciation of his services to the Club. The new President is Mr. A. J. Hughes. Club roll: 29. *Secretary*: P. D. G. Hobbs, 31, Estcourt Road, Gloucester.

EXETER M.C.—The Club have moved to much better quarters, and everybody is delighted with the change. Model-building continues as keenly as ever, and models in hand include cranes and two large bridges. Several members of the 10th Exeter Scout Troop have joined the Club. Club roll: 17. *Secretary*: K. Strudwick, 22, Water Lane, St. Thomas, Exeter.

BRANCH NEWS

NEW ROAD (SOUTH CHINGFORD)—"Chingford Day" Display was the climax to weeks of enthusiastic preparation, and was most successful. The Branch Exhibit included about 120 ft. of track, three sidings and both a through and a terminal station. Subsequent meetings were devoted to track running operations. *Secretary*: E. Newman, 57, Harold Road, South Close, Chingford, London E.4.

ABBEY (CARLISLE)—A Track Running Evening, when each member was allotted a definite part of the room in which to lay down his stock, proved an interesting variation from the usual track meeting. On another occasion a photograph was taken of a fairly large junction laid down by the members, with both goods and passenger trains in the picture. *Secretary*: J. Bell, 28, Blunt Street, Carlisle.



Members of the Cape Peninsula M.C., Cape Town, South Africa, with Mr. Z. A. de Beer, Leader, first on the left in the second row, and Mr. F. Korck, Secretary, at the extreme right in that row. The lady in the centre of the group is the wife of the ex-President, the Rev. J. S. Pollock, who resigned recently and has removed to Canada. This very enthusiastic Club was affiliated in March this year, and in addition to its energetic programme of model-building holds lectures and film shows.

The Greatest Meccano Competition

By "Spanner"

A Challenge to Model-builders Everywhere

THE 1952-3 Meccano International Model-Building Competition announced last month will be an outstanding event in the already colourful history of Meccano. In itself it creates a record, for never before has there been a Meccano model-building Contest in which the range and value of the prizes to be awarded in the various Sections have been so extensive. A full list of these awards is given on page 459.

I feel sure that this great contest will create another record in that it will attract the largest number of entries that any Meccano Model-Building Competition has ever had. It is certain

too that this record will be one of quality as well as quantity, for year by year model-builders grow more and more ingenious and original, while retaining all the old skill in design and construction for which Meccano enthusiasts have long been famous.

On reading the details of this Contest on pages 458 and 459, model-builders will see that provision has been made for every type of enthusiast. There are special prizes for the youngest, working with small Outfits, others for those who have made progress beyond this stage, and yet others for the veterans of Meccano, those who have practiced model-building for many years and have accumulated large stores of Meccano parts.

With this Competition too there is an innovation. This takes the form of special prizes for Meccano Clubs. The construction of large models, with interesting and perhaps intricate movements, is a favourite

pursuit of members of Clubs, who pool their skill and knowledge, as well as their parts, to build up something bigger and better than each of them alone could construct. It is these Club models, built by joint efforts, that will be eligible for this special Section of the Competition, and an entry must be expected from every

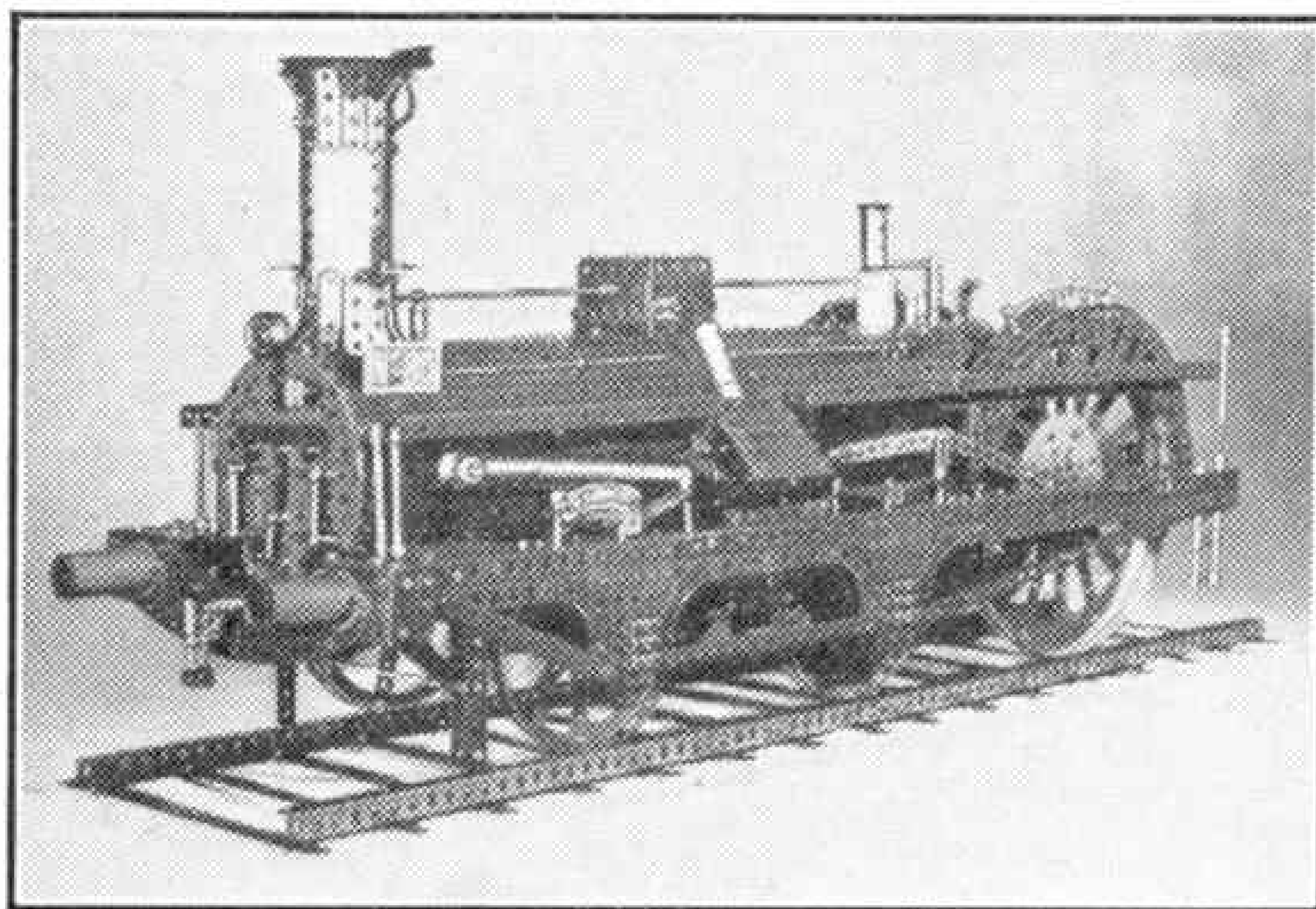
Meccano Club in the world.

There is one other point I would like to mention. Anyone who wins a prize, in whatever Section, will have reason to be proud of his success, quite apart from the satisfaction that winning one of the many fine big prizes will give him. He will know

that his success was earned in fair competition with his fellows, and that he has entered the ranks of model-builders whose skill is acknowledged.

ALL THAT NOW REMAINS IS FOR MODEL-BUILDERS EVERYWHERE TO ACCEPT THIS CHALLENGE TO THEIR SKILL AND ENTERPRISE.

Let me remind all readers, at home or overseas, that *entries can be sent in any time before the end of March 1953*. There are no irksome rules and regulations to bother competitors. All that is necessary is fully explained in a special Competition Folder that can be obtained free of charge from any Meccano dealer. If it is not convenient to visit your Meccano dealer to get a copy of the folder, just send a postcard to *Information Service, Meccano Limited, Binns Road, Liverpool 13*, saying that you wish to have a folder, and one will be sent to you by return of post.



Excellent workmanship and the choice of an unusual subject made this model a prize-winner. It represents "Le Continent," a famous old locomotive that ran for 62 years. The model was built by E. D. Clements, Orpington.

Among the Model-Builders

By "Spanner"

Some Good Ideas from Denmark

I was very pleased recently to receive a letter from one of my Overseas friends, N. Gottlob, Hjortekaer, Denmark, with which he sent several well-thought-out suggestions for Meccano mechanisms of various types. These he has developed as a result of his long experience in Meccano

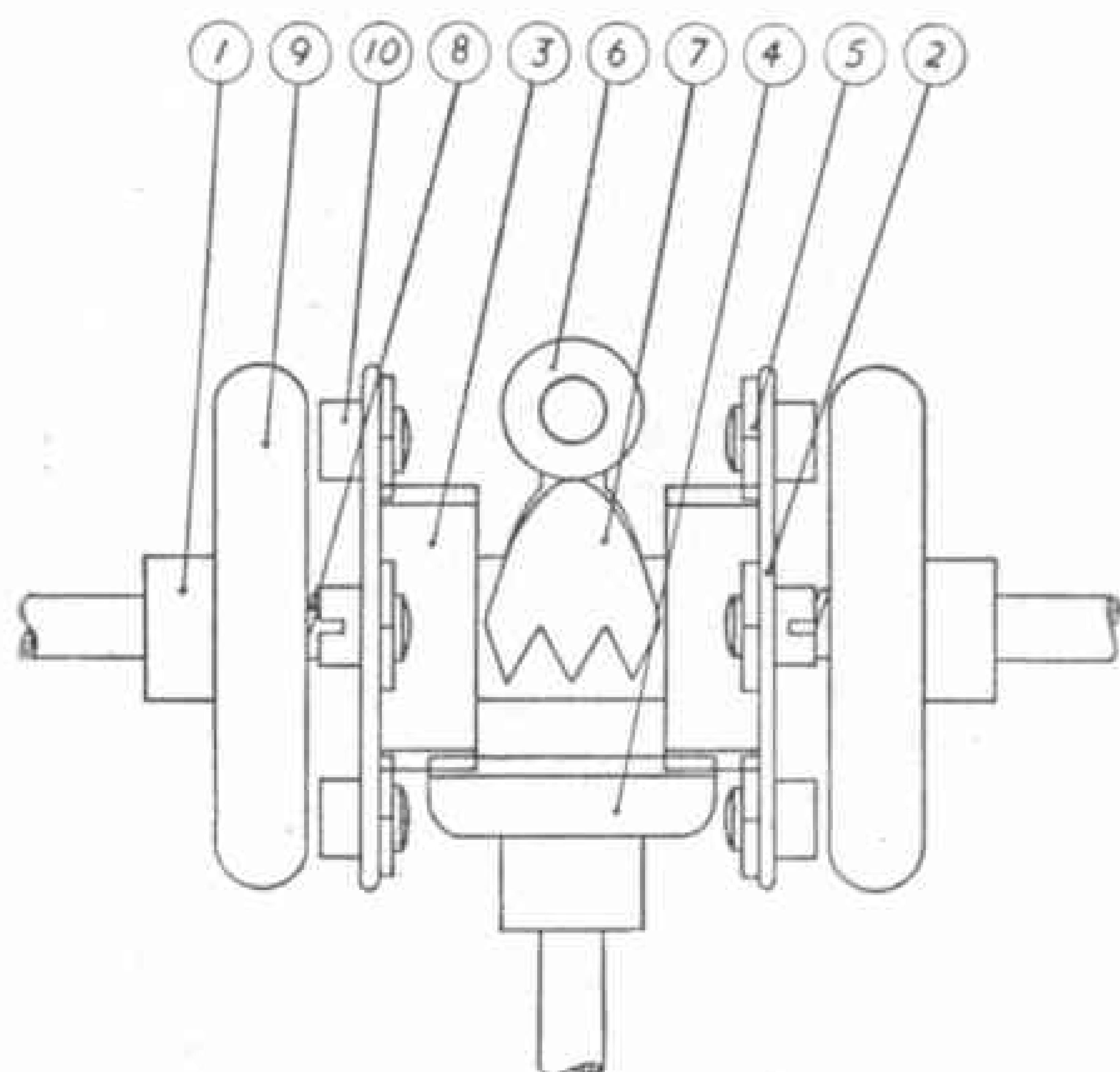


Fig. 1. A drawing of the novel reversing friction clutch designed by N. Gottlob, Hjortekaer, Denmark.

model-building, during which he has come across interesting problems that he has set out to solve using standard Meccano parts. I am sure that readers will find the results of his experiments interesting and of help in their own model-building, and therefore his suggestions will be dealt with in these pages from time to time. The first of them, and one with which Gottlob is especially pleased, is a novel reversing friction clutch, and this is illustrated by the diagrammatic sketch reproduced on this page.

Two 1" Pulleys fitted with Rubber Rings, one of which is shown at 9, are placed some distance apart on a suitable Rod. A Compression Spring is cut in half and one piece is placed against each Pulley, as shown at 8. The Rod carries also two Wheel Discs, one of which is shown at 2, and two $\frac{3}{4}$ " Pinions, placed against each Wheel Disc as shown at 3, and loose on the Rod.

The Wheel Discs are fitted with four short bolts with their nuts arranged to engage the teeth of the Pinions.

When the clutch is at rest the Springs keep the heads of the bolts clear of the Rubber Rings. A $\frac{3}{4}$ " Contrate Wheel 4 meshes with both Pinions, and when the clutch is activated by movement of the Centre Fork 7, which is held in the transverse bore of a Coupling 6, either of the Wheel Discs can be engaged with its associated Rubber Ring, and the drive is then transmitted from the vertical to the horizontal Rod, or vice versa, whichever is desired.

To obtain a powerful transmission



Among the many Meccano enthusiasts in Malta G.C. is A. Coppola, Birkirkara, Malta, who is seen here. He was a successful competitor in the Christmas Model-building Competition.

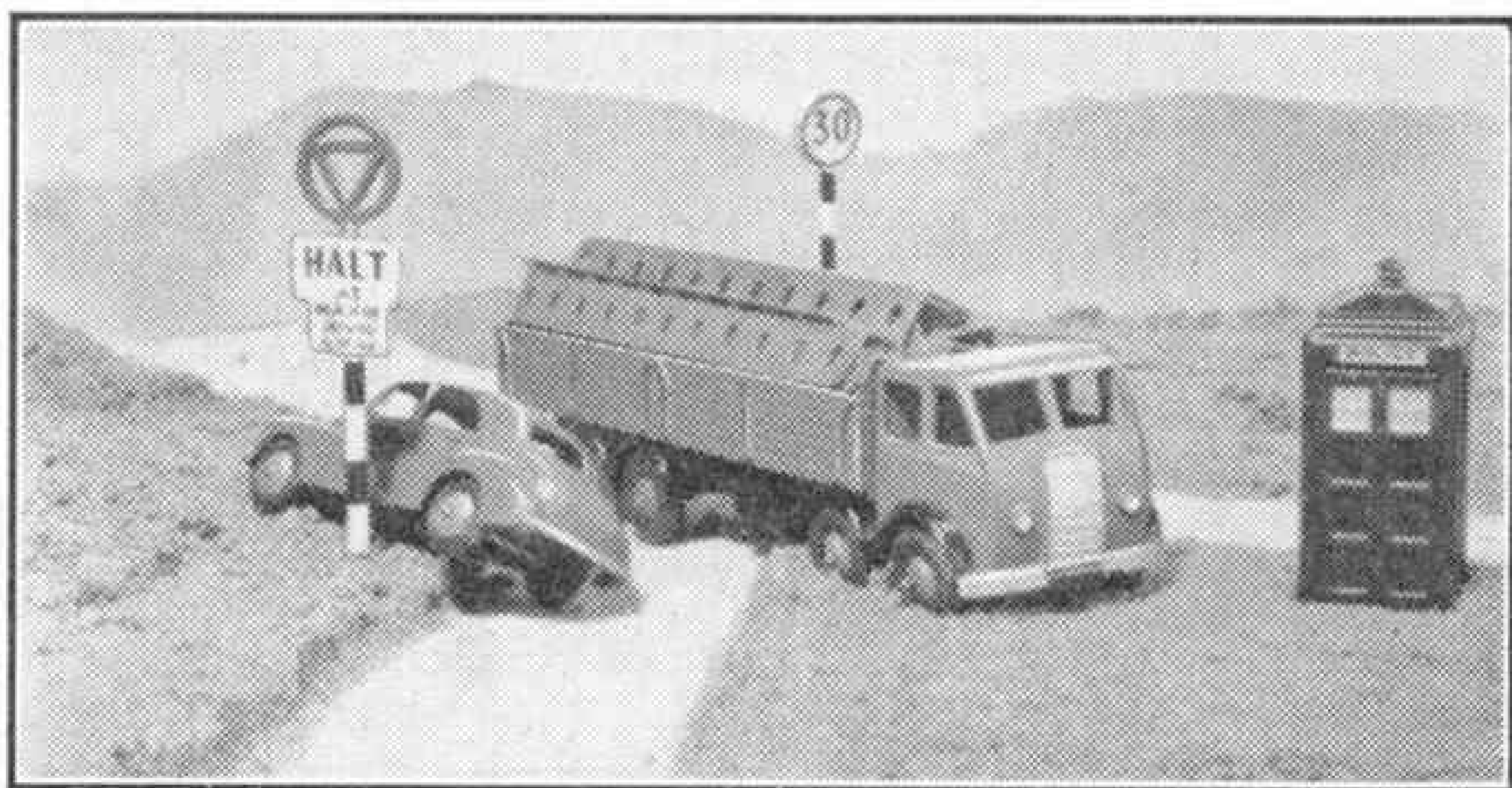


Fig. 2. A near miss! A realistic table-top photograph featuring Dinky Toys. It was taken by D. Childs, Stanmore, who finds his Dinky Toys vehicles ideal for making up interesting table-top scenes of this kind. Note the Meccano Angle Girders used as a load for the Foden 8-wheel wagon.

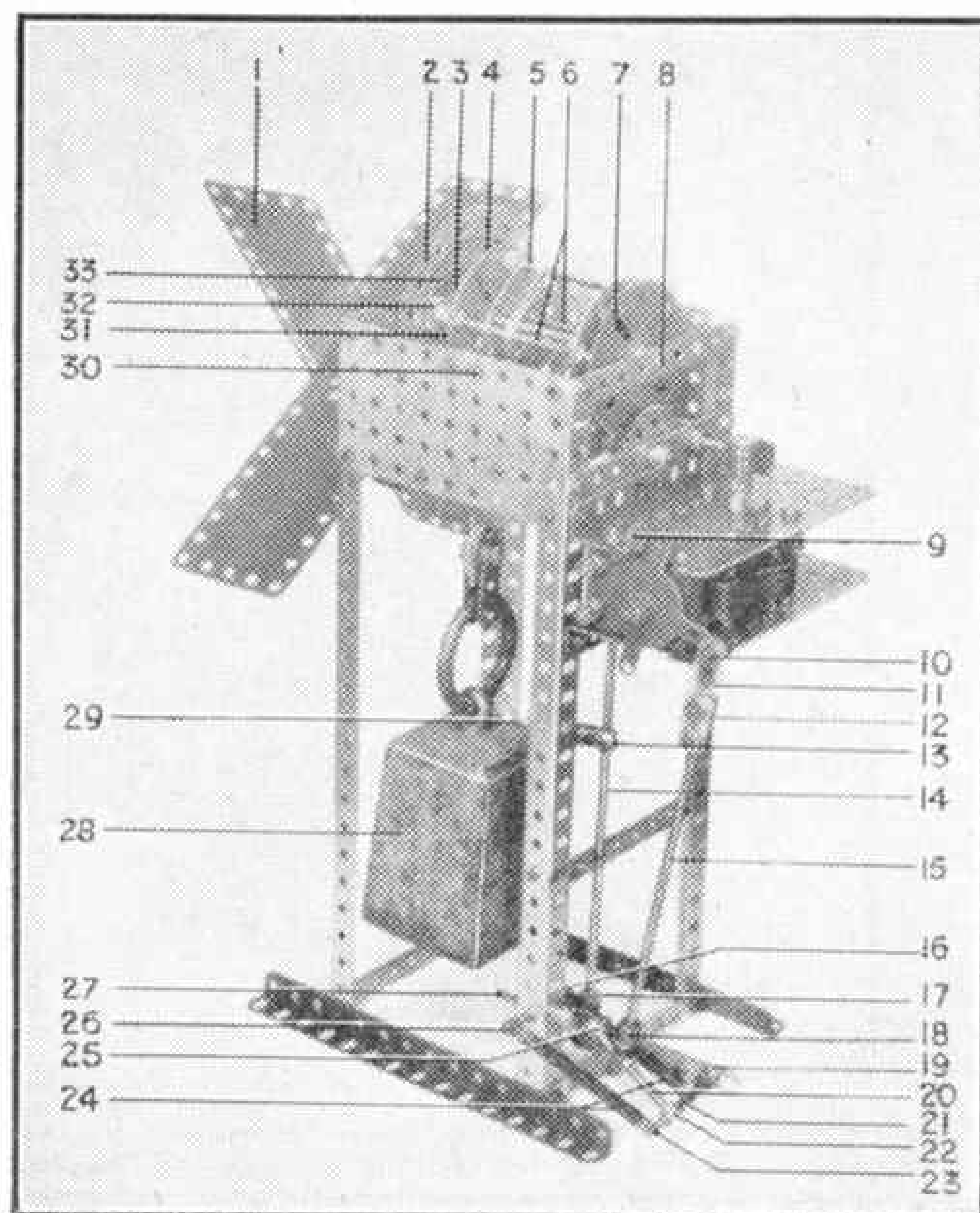


Fig. 3. N. C. Ta'Bois, Woodford Green, has designed many ingenious Meccano mechanisms. One of his latest is this automatic winding device for use with weight-driven clocks.

through the clutch it is essential to let it work at a comparatively high speed.

Automatic Clock-Winding Mechanism

Mr. N. C. Ta'Bois, Woodford Green, sends the following suggestion for an automatic clock-winding mechanism for use with weight-driven clocks of the grandfather type. The mechanism is shown in Figs. 3 and 4 on this page.

A "drum" is built up from two Face Plates 31, joined by two 4" Screwed Rods 6 on which two $\frac{1}{2} \times \frac{1}{4}$ " Pinions (one shown at 32) are free to rotate, locknuts holding them in place. Two 3" Axle Rods, one of which is shown at 5, complete the drum. A length of wire is attached to Rod 5, wound round the drum, passed through the pulley block supporting the weight 28 and finally is fixed to the frame by a nut and bolt 30. The Face Plates 31 rotate on a 5" Rod 8, which carries a 57-tooth Gear Wheel 3 and a $2\frac{1}{2}$ " Gear Wheel 7.

A Gear Ring 2 is bolted to and spaced by Washers from a $3\frac{1}{2}$ " Strip 4, which is fixed to a Bush Wheel 33 loose on Rod 8. A $\frac{1}{2}$ " Pinion on a 2" Rod 34 meshes with the Gear

Ring and through a further $\frac{1}{2}$ " Pinion and a $2\frac{1}{2}$ " Gear Wheel drives the "fan" 1, which takes the place of the escapement and pendulum of an actual clock, and acts as an air brake to slow down the fall of the weight 28. The $2\frac{1}{2}$ " Gear 7 is driven from an Electric Motor.

An 8" Axle Rod 14 is slidable vertically and is actuated by two Couplings 13 and 17 carrying short Rods 29 and 27, which bear on the upper and lower surfaces of the weight 28. Coupling 17 has a $2\frac{1}{2}$ " Strip supported by a 1" Corner Bracket bolted to it. This Strip carries a 2" Slotted Strip 19. A $1\frac{1}{8}$ " Bolt 21 sliding in the slot in this Strip, is screwed into a Collar 22 on Rod 20, which in turn is held in the "spider" of a Swivel Bearing 25. Bolt 21 and three $\frac{3}{4}$ " Bolts 16, 23 and 26, provide the attachments for two Springs 24. Bolt 16 is lock-nutted to a Threaded Boss 35 fixed to Bolt 26. A $6\frac{1}{2}$ " Rod 15 connecting the toggle switch with the Motor, is attached to the Rod 20 by Swivel Bearing 18, and to the Motor switch by a 2" Slotted Strip 11, bolted to a Coupling 12 on Rod 15. A Bolt 10 lock-nutted to the Motor switch slides in the slot of Strip 11. (Continued on page 480)

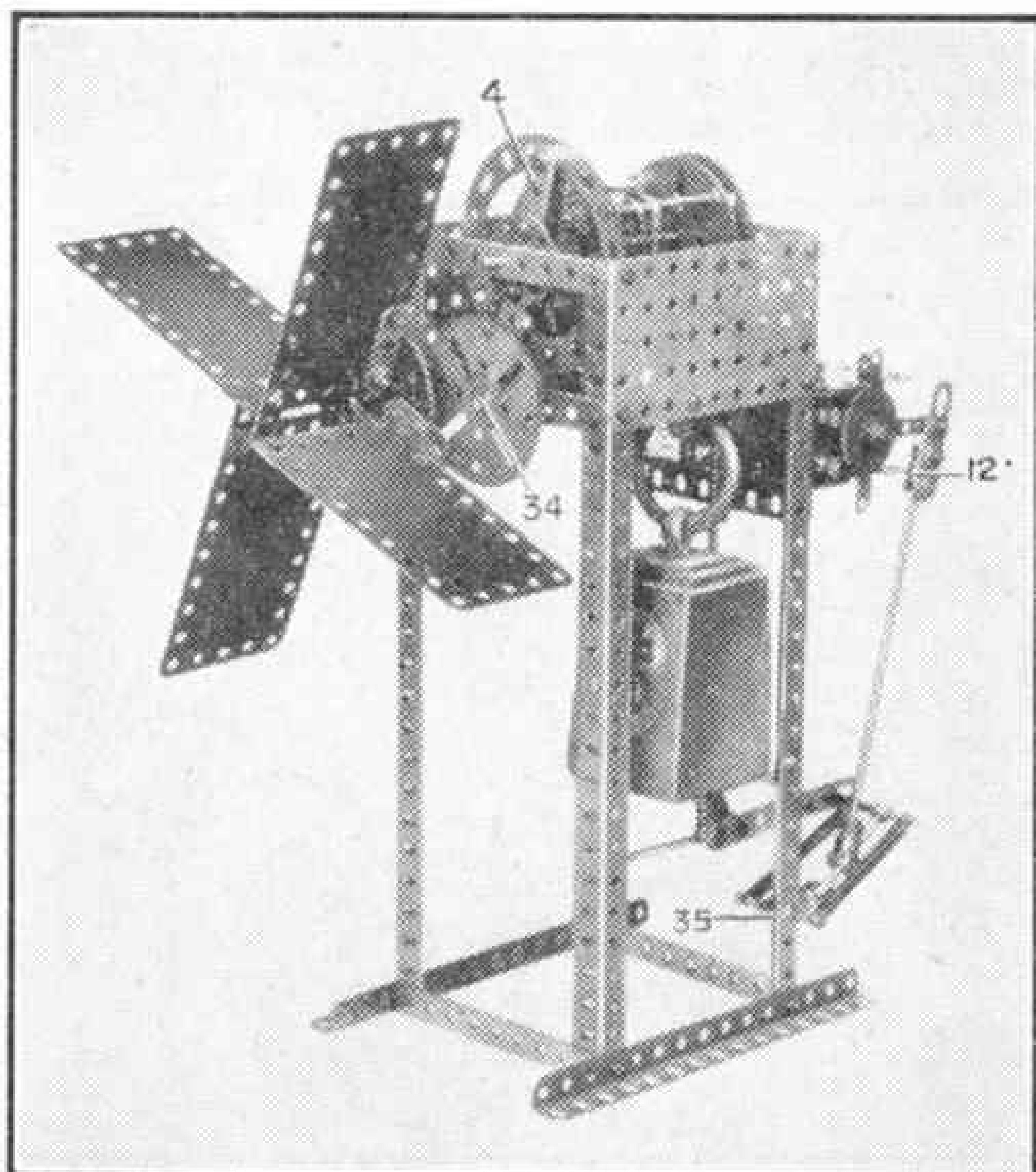


Fig. 4. Another view of the automatic clock-winding mechanism. Details of it are given on this page.

New Meccano Model

Tipping Power Barrow

THE subject of this month's new model is a new type of motor-driven vehicle fitted with a tipping hopper, which is designed for use on building construction sites. It is known as a Tipping Power Barrow, and among its several interesting features is a combined power unit and steering head, which is reproduced as realistically as possible in the model.

In the actual machine all the movements are controlled by a ring pivotally mounted at the top of the steering head. This ring is used for turning the power unit to steer the Barrow, and as a clutch for engaging the drive to the wheels. As soon as the ring is tilted the clutch is engaged and the engine starts to drive the machine.

Construction of the model should be begun with the power unit, which is supported freely in a special built-up bearing so that the complete unit can be turned. The basis of the unit is an E20R Electric Motor, placed with the reversing switch uppermost. Two 1½" Corner Brackets 1 are bolted to the lower edge of each Motor side-plate, and are extended by a 2" Slotted Strip 2. The bolts fixing the Corner Brackets to the side-plates secure also 3½" Strips, which are fitted with Angle Brackets 4, and are connected at their ends by 1½" x ½" Double Angle Strips 3.

The driving wheels are 2" Pulleys with Tyres, fixed on a 2½" Rod mounted in the slotted holes of the Slotted Strips 2. The Rod is forced to the upper limit of the holes by a Compression Spring 5 on each side. These Springs are slipped over Threaded Pins screwed into Collars 6 and locked in place by their nuts. The Collars are passed over the ends of the driving axle, and the shanks of the Threaded Pins are free to slide in Angle Brackets bolted to the lower ends of the Slotted Strips.

A ½" Pinion on the Motor armature shaft meshes with a 57-tooth Gear on a 2½" Rod mounted in the Motor side-plates and held in position by a Collar.

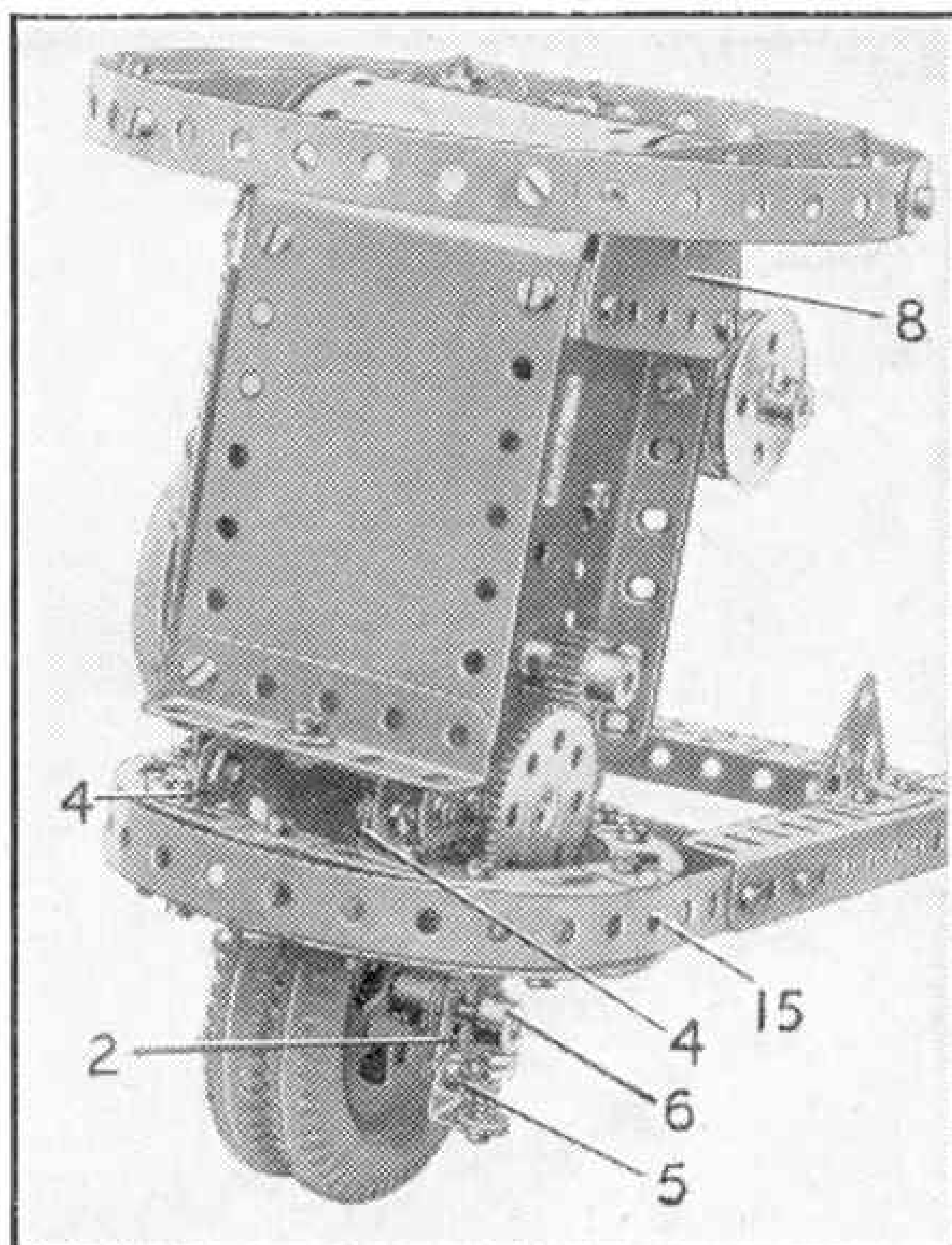


Fig. 1. A view of the driving unit of the Tipping Power Barrow, showing the method of mounting the E20R Electric Motor.

The Tyres on the 2" Pulleys are pressed against the 2½" Rod by the action of the Compression Springs, and this arrangement provides a powerful friction drive to the Pulleys.

The Angle Brackets 4 are bolted as shown in Fig. 1 to a ring made from four 3" stepped Curved Strips connected together. This is connected to a similar ring by eight ¼" Bolts, but the rings are spaced apart by two Collars and a Washer on each Bolt. An Angle Bracket 7 is fixed in each of the free holes left in the ring between the ¼" Bolts, and the positions of the Angle Brackets are adjusted by their slotted holes so that the rim of the ring projects slightly outside each Angle Bracket.

The Motor casing is provided by a 5½" x 2½" Flexible Plate at each end. One of these is bolted to the flanges of the Motor, and the other is fixed to a 2½" Angle Girder bolted to one of the Double Angle Strips 3. A Semi-Circular Plate 8 is attached on each side to Angle Brackets, and on one side two 3½" Strips 9 are bolted between the Semi-Circular Plate at the top and a 2½" x ½" Double Angle Strip at the bottom. This side is completed by two 2½" Strips bolted between the Strips 9, and a Wheel Flange 10 fitted with a Bush Wheel is slipped over ¼" Bolts held by nuts in the 2½" x ½" Double Angle Strip and the lower 2½" Strip. Lock-nuts are used to hold the Wheel Flange in position.

The other side of the casing is completed by fitting a

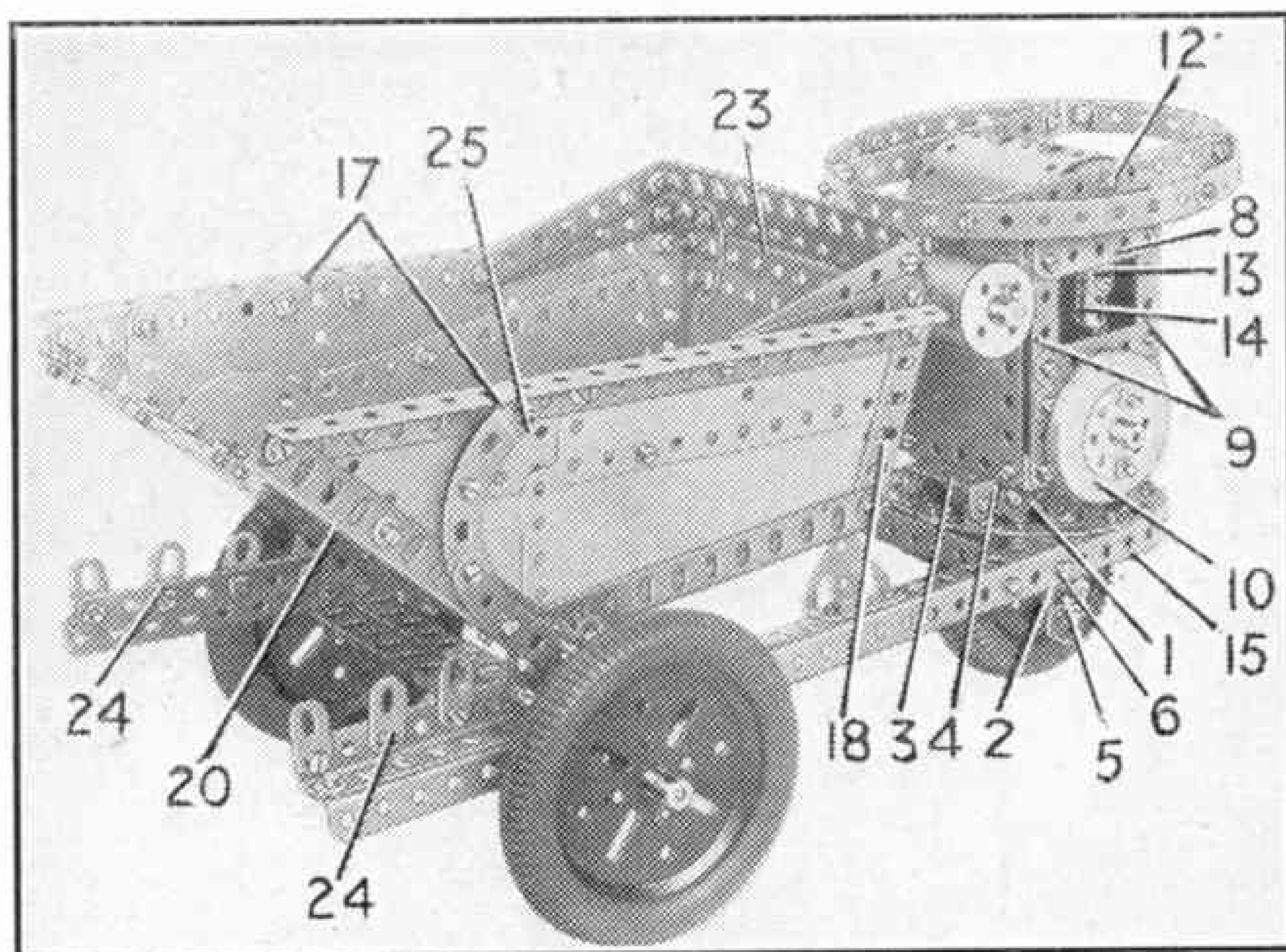


Fig. 2. The Tipping Power Barrow ready for travelling, with the hopper in position to receive and carry its load.

cover 11 over the gear drive. This cover is made from a $2\frac{1}{2}" \times \frac{1}{2}"$ and two $2\frac{1}{2}" \times 1"$ Double Angle Strips.

The Motor switch is controlled by tilting a ring made from two $9\frac{1}{2}"$ Strips curved and bolted together and fitted with two $4\frac{1}{2}"$ Strips attached to the ring by Obtuse Angle Brackets. A $3\frac{1}{2}"$ Screwed Rod 12 is passed through the Semi-Circular Plates 8 and the centre holes of the $4\frac{1}{2}"$ Strips, and each Strip is fixed

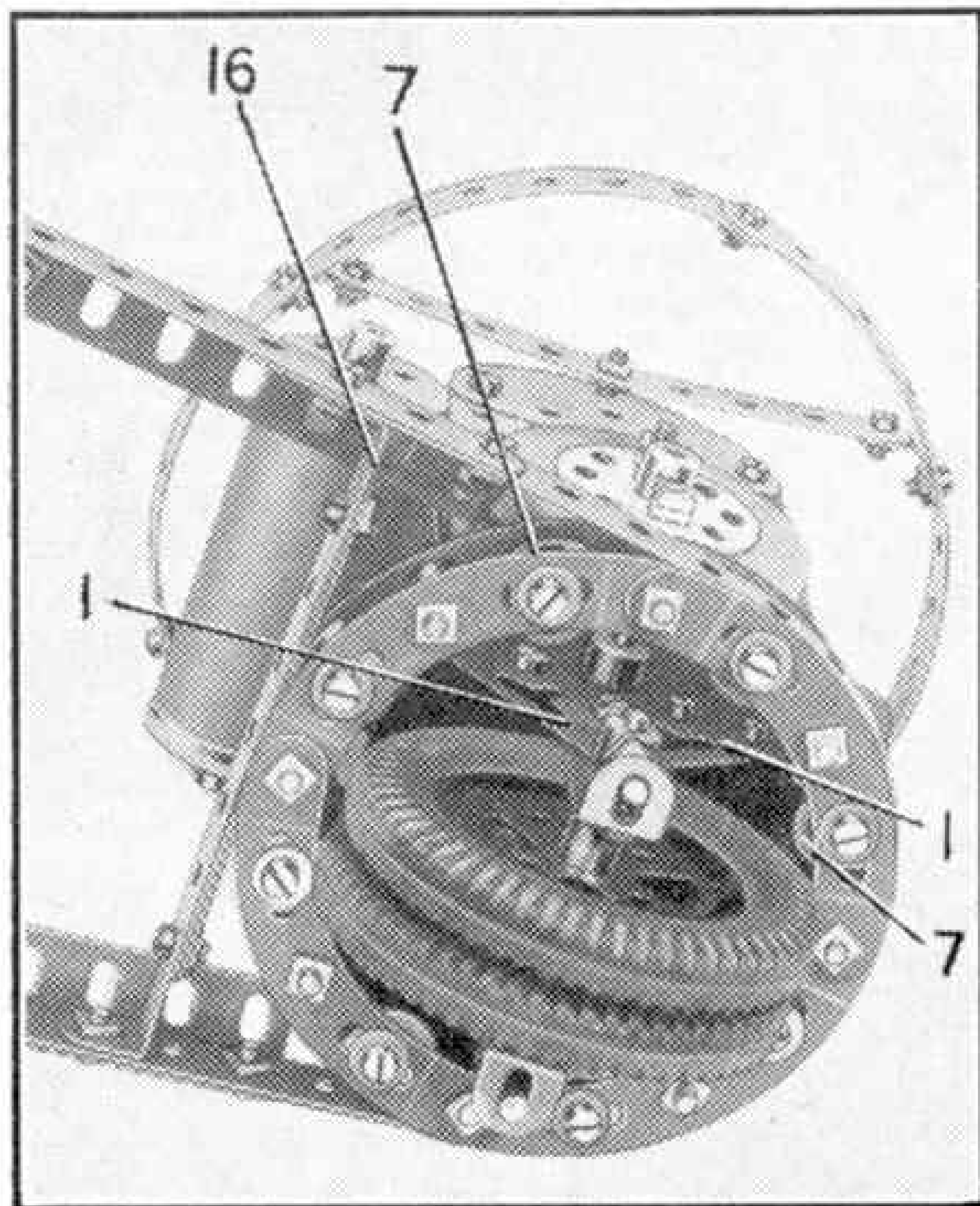


Fig. 3. The spring arrangement that provides a friction drive to the 2" Pulleys is seen in this underneath view of the power unit.

tightly to the Screwed Rod between two nuts. A 2" Strip 13 is also clamped between nuts on the Screwed Rod, just inside one of the Semi-Circular Plates. Strip 13 is connected by a shouldered bolt taken from a Swivel Bearing, to a Coupling 14, which is free to slide on a $1\frac{1}{8}"$ Bolt held by a nut in one arm of the Motor switch.

The engine unit is completed by curving the upper ends of the $5\frac{1}{2}" \times 2\frac{1}{2}"$ Flexible Plates to the same radius as the Semi-Circular Plates 8. The fuel tank is a Cylinder fitted with two $1\frac{1}{8}"$ Flanged Wheels.

The barrow chassis consists of two $12\frac{1}{2}"$ Angle Girders bolted to a $12\frac{1}{2}"$ Strip 15 curved so that it fits neatly between the rings of the engine unit bearing. A $4\frac{1}{2}" \times \frac{1}{2}"$ Double Angle Strip 16 is strengthened by two $3\frac{1}{2}"$ Strips and is bolted between the $12\frac{1}{2}"$ Angle Girders as shown in Fig. 3, so that the engine unit is held in position but is able to rotate freely.

The main axle beam consists of two $7\frac{1}{2}"$ Angle Girders, attached by Angle Brackets to the chassis so that they overlap the $12\frac{1}{2}"$ Angle Girders on each side by one hole. The 3" Pulleys are free to turn on $1\frac{1}{2}"$ Rods held in Couplings fixed by bolts to one of the $7\frac{1}{2}"$ Angle Girders. Collars are used to hold the Pulleys in position.

Each side of the tipping hopper is assembled from a $9\frac{1}{2}"$ Angle Girder 17, a 3" Angle Girder 18 and two $5\frac{1}{2}"$ Angle

Girders 19 and 20. The side is filled in by a $5\frac{1}{2}" \times 2\frac{1}{2}"$ Flexible Plate, two $5\frac{1}{2}" \times 1\frac{1}{2}"$ Flexible Plates and a Semi-Circular Plate. The lower edges of the sides are connected by $4\frac{1}{2}"$ Strips, and the upper edges are linked by $5\frac{1}{2}"$ Strips. The rear is filled by a $4\frac{1}{2}" \times 2\frac{1}{2}"$ Flexible Plate 21, and the front consists of two $5\frac{1}{2}" \times 2\frac{1}{2}"$ Flexible Plates 22. The base is also made from two $5\frac{1}{2}" \times 2\frac{1}{2}"$ Flexible Plates. A $5\frac{1}{2}"$ Flat Girder 23 is attached to the rear by Obtuse Angle Brackets, and is connected to the sides by $3\frac{1}{2}"$ Strips bolted to Angle Brackets.

The hopper is not pivoted directly to the chassis, but is free to roll on built-up rack strips made from $5\frac{1}{2}"$ Angle Girders 24, each of which is fitted with five Fishplates arranged as shown in Fig. 2. The rollers on each side of the hopper are made from two $2\frac{1}{2}"$ stepped Curved Strips and two $2\frac{1}{2}"$ Curved Strips. These are arranged in pairs as shown in Fig. 4, but are separated by three Washers on each bolt. The Curved Strips are held together by a $\frac{1}{2}"$ Bolt 25 and a $\frac{3}{4}"$ Bolt 26, and by three $\frac{3}{8}"$ Bolts arranged in alternate holes. The $\frac{1}{2}"$ and the $\frac{3}{4}"$ Bolts are used to connect the rollers to the sides of the hopper, two nuts on each Bolt being used for this purpose. The Fishplates on the Angle Girders 24 engage between the Bolts in the Curved Strips, and they should be adjusted at slight angles so that the hopper rolls freely.

The bearings for the Rods in the power unit should be oiled lightly, and a few drops should be applied to the Treaded Pins that carry the Compression Springs, so that the Springs are free on the Pins. The main power-unit bearing should be oiled also, taking care to prevent oil reaching the Tyres, as this will reduce the effectiveness of the drive.

Parts required to build model Tipping Power Barrow: 1 of No. 1; 2 of No. 1a; 2 of No. 2; 5 of No. 2a; 10 of No. 3; 2 of No. 5; 1 of No. 6; 2 of No. 8; 2 of No. 8a; 2 of No. 8b; 6 of No. 9; 2 of No. 9c; 1 of No. 9d; 12 of No. 10; 26 of No. 12; 6 of No. 12c; 2 of No. 16a; 2 of No. 18a; 2 of No. 19b; 2 of No. 20; 2 of No. 20a; 1 of No. 23a; 1 of No. 24; 1 of No. 27a; 149 of No. 37; 36 of No. 37a; 68 of No. 38; 2 of No. 46; 2 of No. 48; 2 of No. 48a; 1 of No. 48c; 2 of No. 55a; 21 of No. 59; 3 of No. 63; 1 of No. 80a; 8 of No. 89a; 4 of No. 90; 4 of No. 90a; 1 of No. 103; 13 of No. 111; 2 of No. 111a; 6 of No. 111c; 1 of No. 111d; 2 of No. 115; 2 of No. 120b; 2 of No. 126; 4 of No. 133; 1 of No. 137; 2 of No. 142a; 2 of No. 142b; 4 of No. 189; 1 of No. 191; 8 of No. 192; 4 of No. 215; 1 of No. 216; 1 E20R Electric Motor.

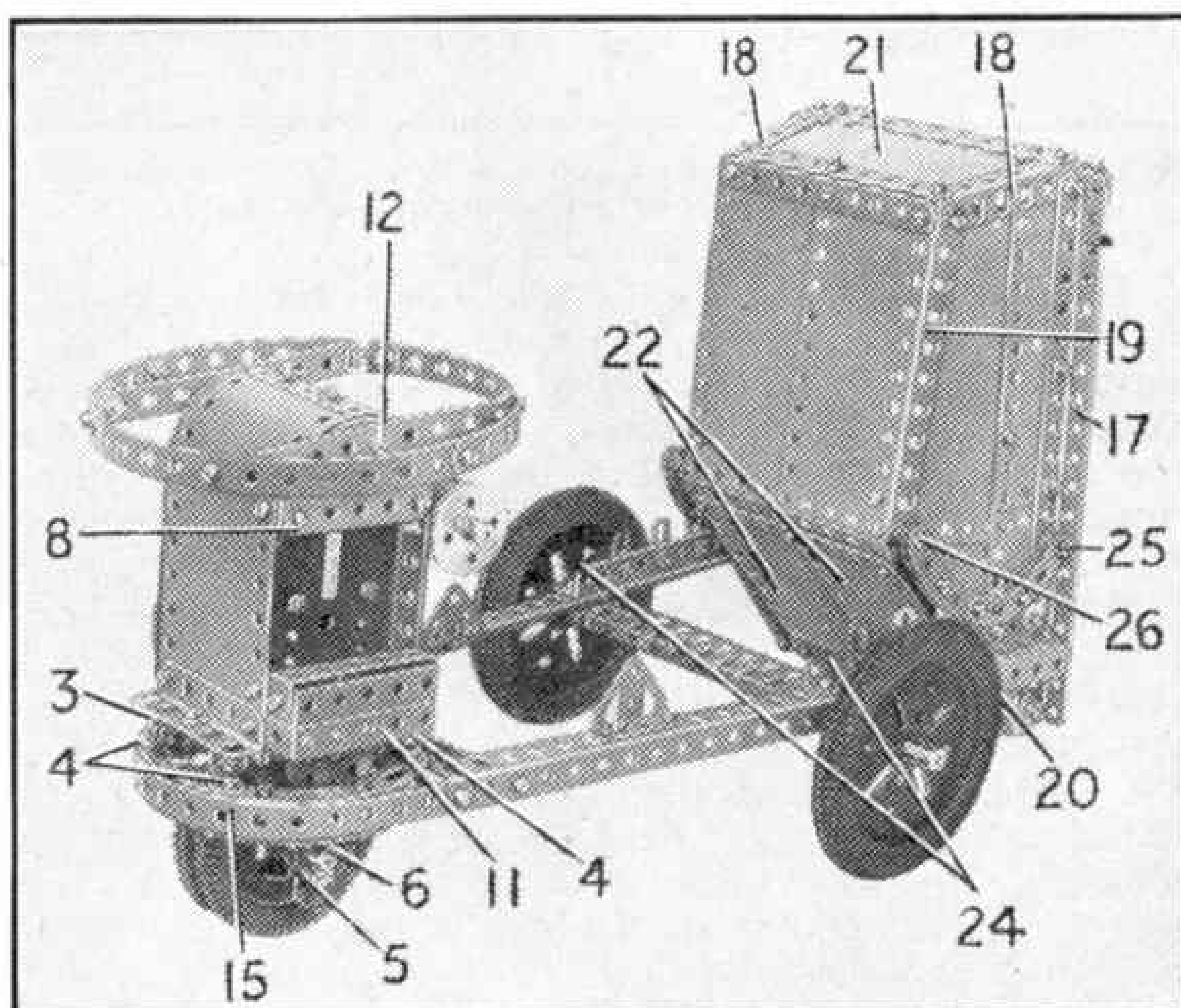


Fig. 4. The Tipping Power Barrow with the hopper tipped for unloading. This view shows also the construction of the front axle.

In Search of New Models

By "Spanner"

Machine Tools Provide Good Subjects

A MODERN engineering shop contains many machines that provide good subjects for a keen model-builder with plenty of Meccano parts at his disposal. Some of the more elaborate equipment in a really up-to-date works may be beyond the possibilities of most model builders, but there are other machines such as drilling, planing and shaping machines, and lathes of various types, that any experienced model-builder will find attractive and absorbing subjects for reproduction in Meccano.

next forward stroke a fresh cut is taken from the metal.

Movement of the tool holder and tool on the cross-slide normally is operated automatically by some type of ratchet or other

feed mechanism driven by the main operating motor, but manual control is also fitted for use in setting up the work.

In the shaping machine it is the tool

that moves and the work piece that is stationary. In this case the tool is carried in a headstock fixed to a stout arm or ram that moves to and fro on slides, and the work is secured to a table that can be raised and lowered and moved transversely.

When necessary a shaping machine can be adapted so as to cut concave or convex surfaces. Concave surfaces are produced by a device in the tool head by means of which the tool is revolved slowly through an arc while

cutting is in progress. For machining convex surfaces the work is mounted on an arbor or spindle, which is caused to rotate at a slow speed during cutting.

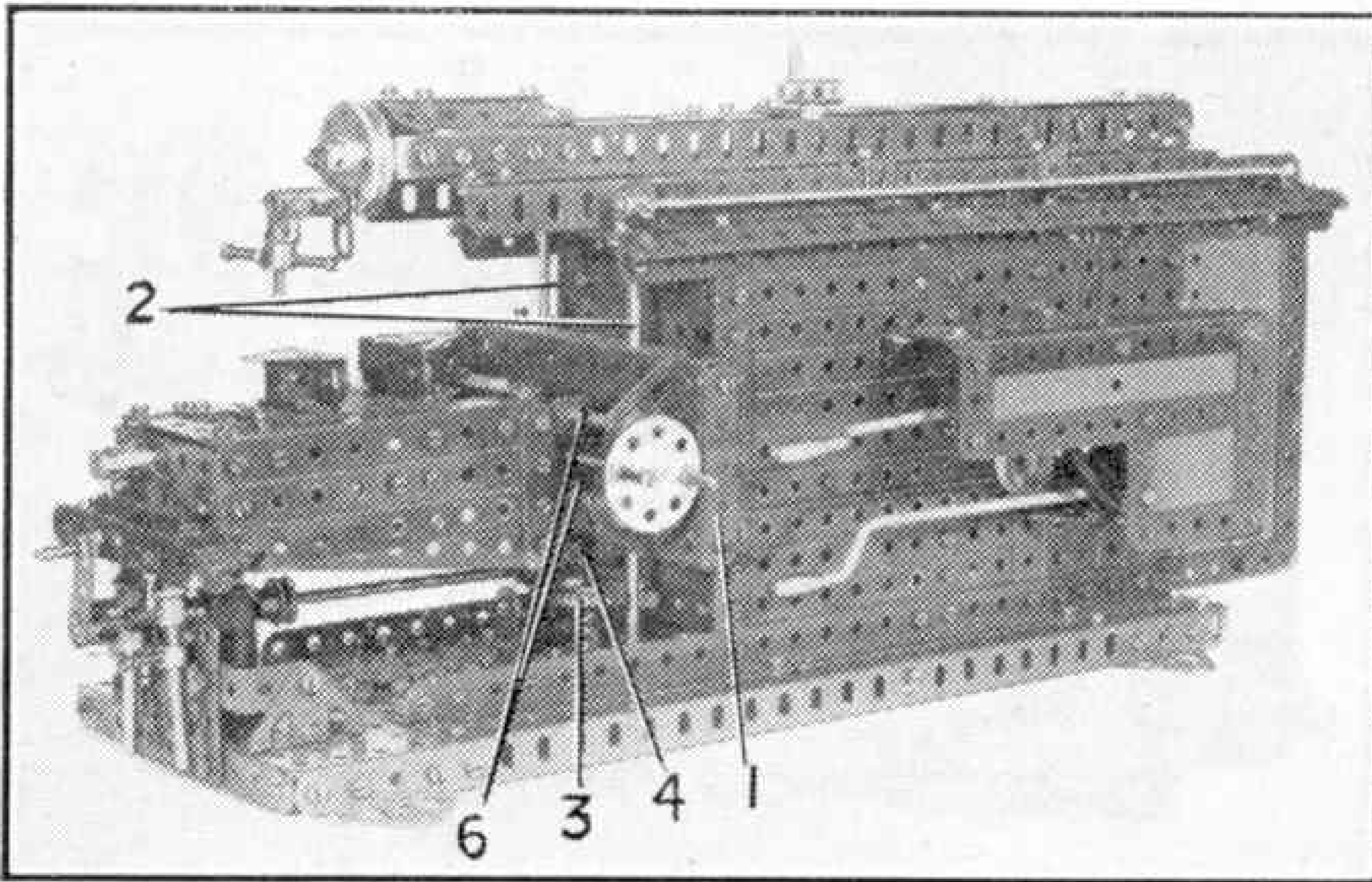
Generally planers and shapers incorporate a quick-return mechanism for bringing the table or the ram and tool back to its starting point for a new cut, at a higher speed than the forward or cutting stroke. This enables time to be saved.

Space is insufficient to describe in detail the various mechanisms by which these essential movements are obtained, but it will be obvious to the reader that in reproducing them in Meccano there is plenty to exercise his skill and ingenuity.

Details and pictures of actual machine



B. W. Rowe, Buckfastleigh, S. Devon, builder of the realistic planing machine illustrated on the opposite page.



A good example of a shaping machine designed for machining metal surfaces. It was built by David de Wit, Blackburn.

Planing and shaping operations are rather alike in some respects, as they both comprise the machining of metallic surfaces by means of tools having only one cutting edge. Planing, however, is usually carried out on work of a larger type. A planing machine has a travelling table on which the work is secured. The table travels on runways between rigid standards, up and down which moves a cross-slide fitted with a tool-box carrying the cutting tool. As the table, with the metal to be machined fixed to it, travels forward, the tool takes a cut from the metal. At the end of each forward stroke the tool holder and tool are moved transversely on the cross-slide a distance equal to the width of cut, so that on the

tools on which models can be based are generally to be found in technical books and periodicals available in most public libraries, and I can assure anyone who has never tried this kind of modelling, that he will find plenty of interest and

Trunnions form bearings for two Rods 6 on which the worktable is slidable horizontally. All the movements of the model are operated by an Electric Motor housed inside the machine, together with the necessary gearing.

As an example of a typical planing machine built in Meccano I cannot do better than to choose a very fine model of this kind built by B. W. Rowe, Buckfastleigh, who was a competitor in a recent "M.M." Competition. His model is seen in the illustrations on this page, which show clearly the massive travelling bedplate or worktable, the vertical standards and the cross-piece and tool saddle they support.

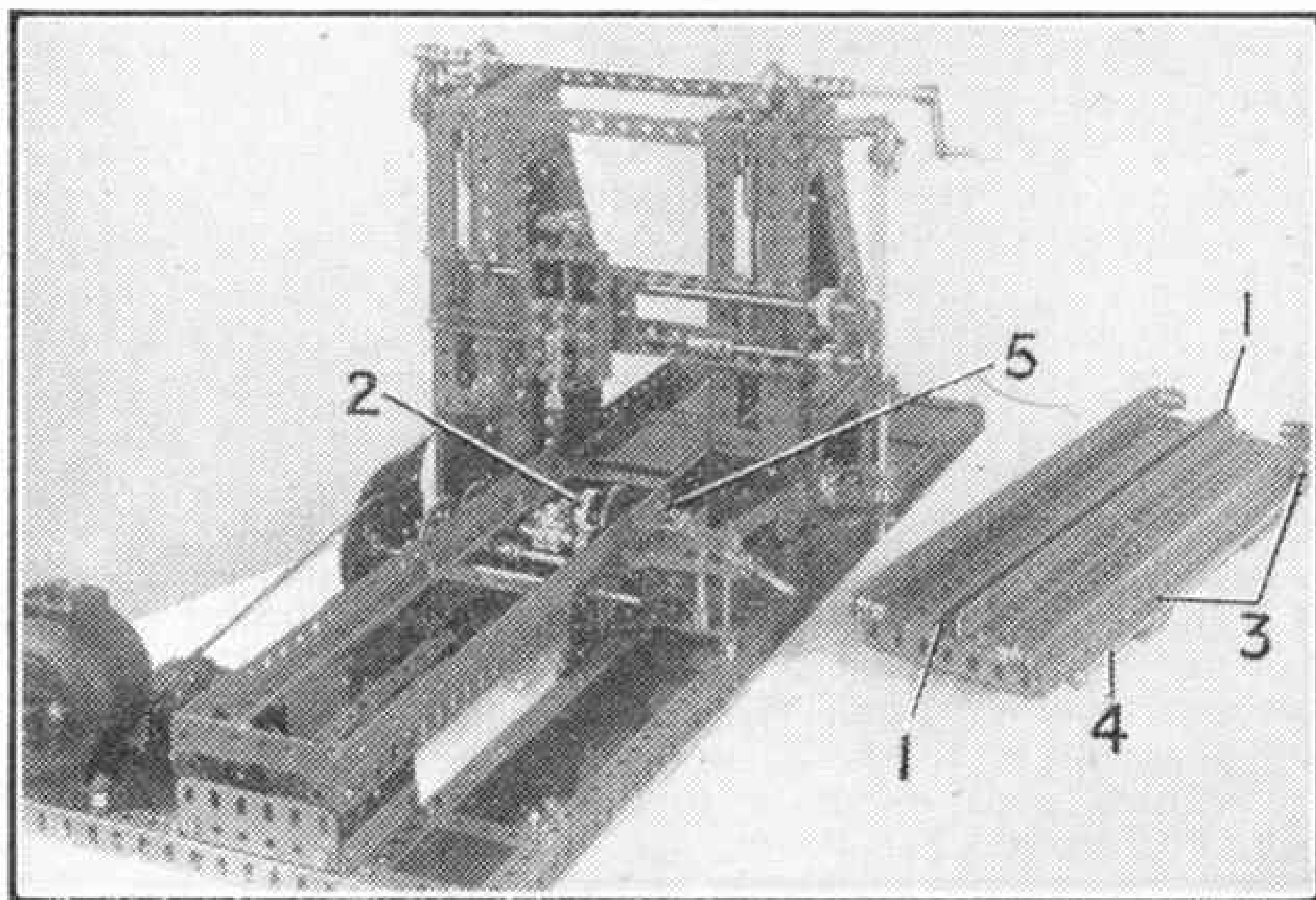
The underside of the bedplate is shown below.

Two $6\frac{1}{2}$ " Rack Strips 1 are bolted between two $12\frac{1}{2}$ " Angle Girders by their elongated holes. The Rack Strips are spaced from these Girders by Washers, and are carefully adjusted so that they mesh with the 1" Gear 2 when the bedplate is in position. When the machine is set in motion the bedplate travels along the run-way until one of the bolts 3 on the $11\frac{1}{2}$ " Rod 4 strikes Pawl 5 to operate the reversing gear.

much to exercise his ingenuity.

I am sure that this is the opinion also of David de Wit, Blackburn, builder of the fine shaping machine shown on the opposite page. In this model the ram has a stroke of 3 in., and the tool head is rotatable. The worktable can be traversed through a distance of 2 in., and has a rise and fall of $1\frac{1}{2}$ in. It is fitted with a vice for holding the metal to be machined, and is traversed by a ratchet mechanism that turns a feed screw $\frac{5}{19}$ th of a revolution for each stroke.

The saddle 1 carrying the worktable is free to move up and down the two Rods 2, and a Coupling fixed to it provides the lead screw for the vertical movement. A Contrate 3 is lock-nutted to a Screwed Rod 4, which passes through the Coupling and is lock-nutted to the base. The saddle is raised and lowered by turning the Bush Wheel handle seen at the side of the machine, the shaft of which carries a Pinion engaging the Contrate.



Another view of the planing machine with the work bed removed to reveal the operating mechanism.

HORNBY RAILWAY COMPANY

By the Secretary

Look After the Engines!

TO most of us, on both real and miniature railways, the engine is the thing. This is quite right. A railway without a locomotive would be a queer affair—a sort of dead museum piece, in fact, without the slightest thrill about it.

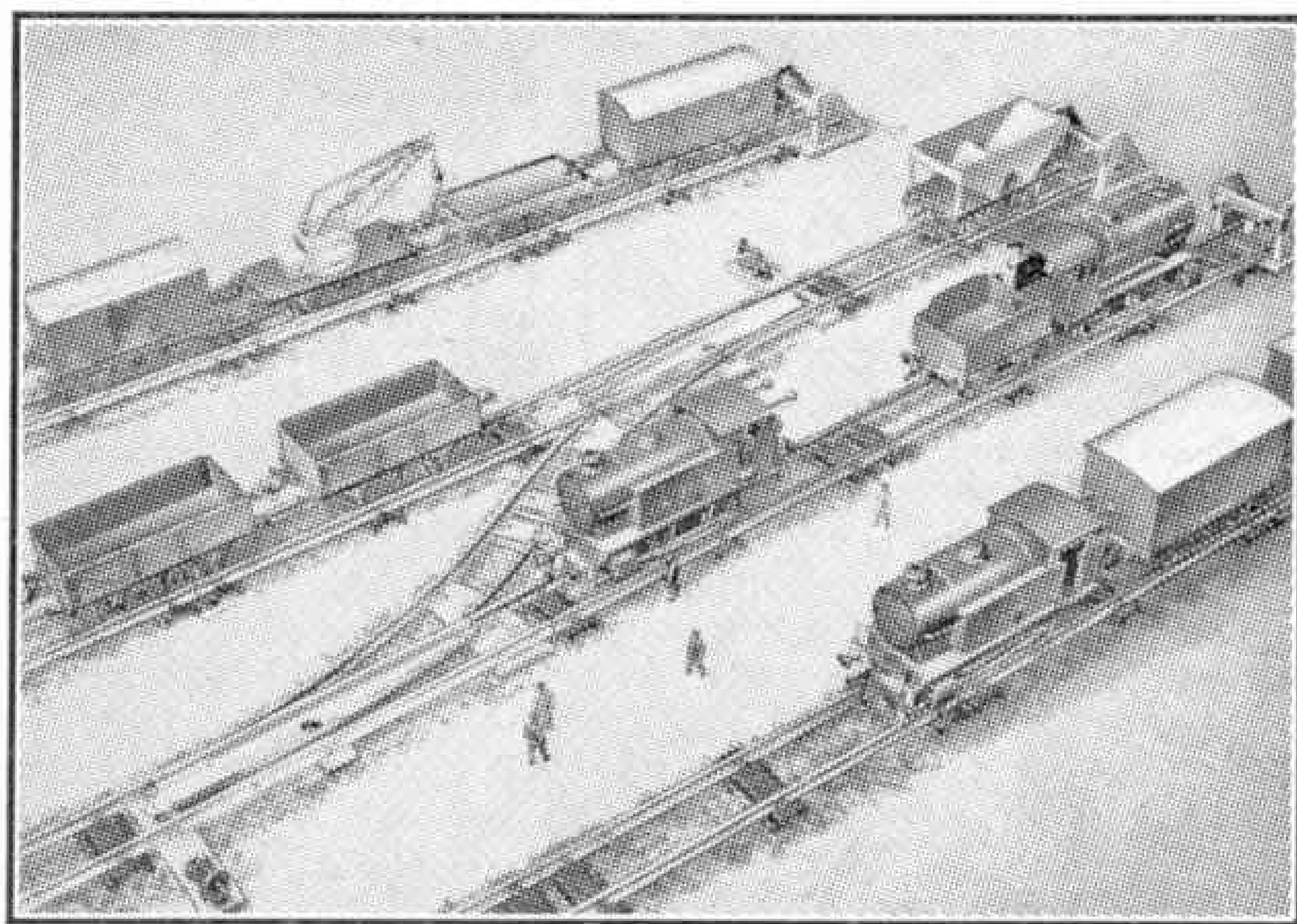
I know that it is not at all necessary to tell you this, but I am doing so to give me an opportunity of reminding you to look after your engines. They must run

wheels should be wiped really clean and this treatment must be applied to all other wheels and the track.

It is not a bad idea to do these things right at the beginning of the "running season," that is NOW, so that we have our equipment in good shape for a good spell of operations. Rolling stock as well as locomotives should be dealt with, because their wheels and axles too can attract plenty of dust.

So much for the cleaning and oiling routine. The rest of the locomotive servicing requirements really call for a little bit of make-believe. A real engine needs water and coal, but a clockwork one does not. So the Water Tank and the Wagons that we provide for "coal" and for "ashes" are more for effect than for real use, but we must have them, of course. They can be placed in the "Loco Yard," where the engines stand when they go in for attention in between trips.

The exact duties of Hornby locomotives vary according to individual layouts. Frequently each



A "Loco Yard" scene on a Hornby layout, with the breakdown train on the far siding. In the foreground a 101 Tank is hauling a train of vans bound for the goods yard.

freely, to begin with, and that means giving them oil.

We all know that our engines need oiling, but apart from the first lubrication when an engine is new I think we rather tend to neglect it. Then when we do think about it perhaps we try to make up for neglect by overdoing things and the oil finds its way all over the place, especially on to the wheel treads and the track; just where we do *not* want it, of course.

So "little and often" should be the rule, and we must make sure each time that any dirt that may be picked up by the mechanism is removed. Oily dust or fluff and so on do accumulate, especially when the railway runs over a carpet. With a fairly stiff paint brush, or something similar that is kept for this work alone, a rag and a length of wire with a point at one end, we can do quite a lot of good. Oily

will take its turn in running both passenger and goods trains. This is quite a good arrangement, as it helps to share the "mileage" between the different engines and it may possibly avoid a certain amount of unprofitable light engine running. But don't forget to arrange the lamps correctly to show what duty the engine is performing. With the exception of the M0 and M1 engines, Hornby Locomotives have lamp brackets at the front and the rear so that headlamps can readily be displayed in the correct code positions.

The tenders of Hornby engines will look all the better if we provide them with dummy loads of coal. This is easily done by making a false bottom of cardboard, rather like the lid of a box, that will fit inside a tender. On the top surface of this small pieces of coal are glued in a realistic heap.

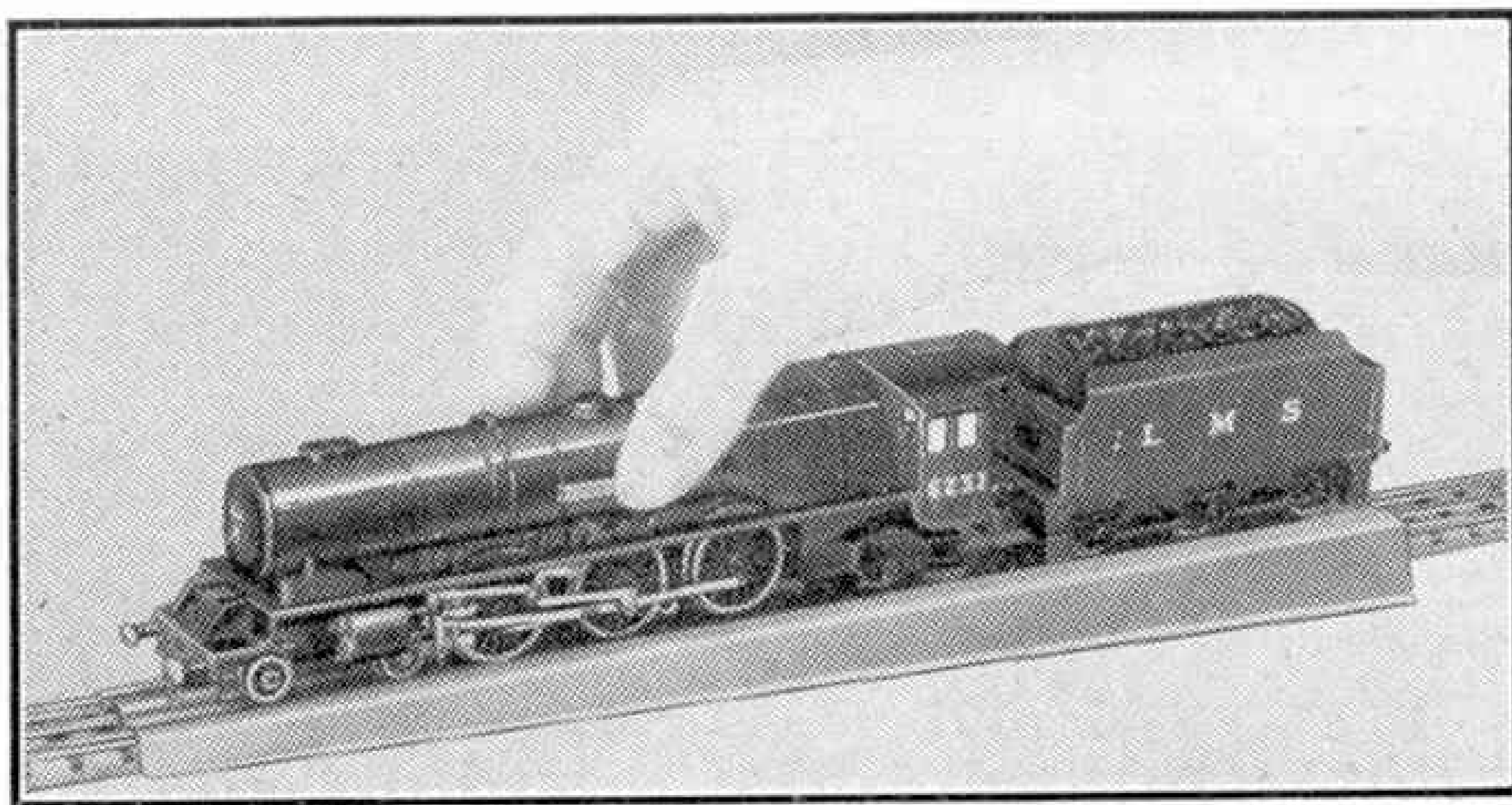
Railing Made Easy

A Valuable New Hornby-Dublo Accessory

SOMETIMES, when perhaps we have been doing something by hand for a long time, not always quite as well as we should have liked, we come across a tool

There is no difficulty about using the Railer. Try it first with a goods wagon of some kind. When this is placed on the Railer and run down the incline

its wheels are guided on to the rails. Passenger coaches, and tender and tank engines, can be railed just as easily by sliding them down. But engines should not be pushed hard enough to rotate the locomotive driving wheels, which are best kept up off the Railer until the engines are nearing the rails, as shown in our top illustration. All the parts of a train in turn can be run down the



The Hornby-Dublo Railer in use to guide the wheels of a Duchess of Atholl and its Tender on to the track.

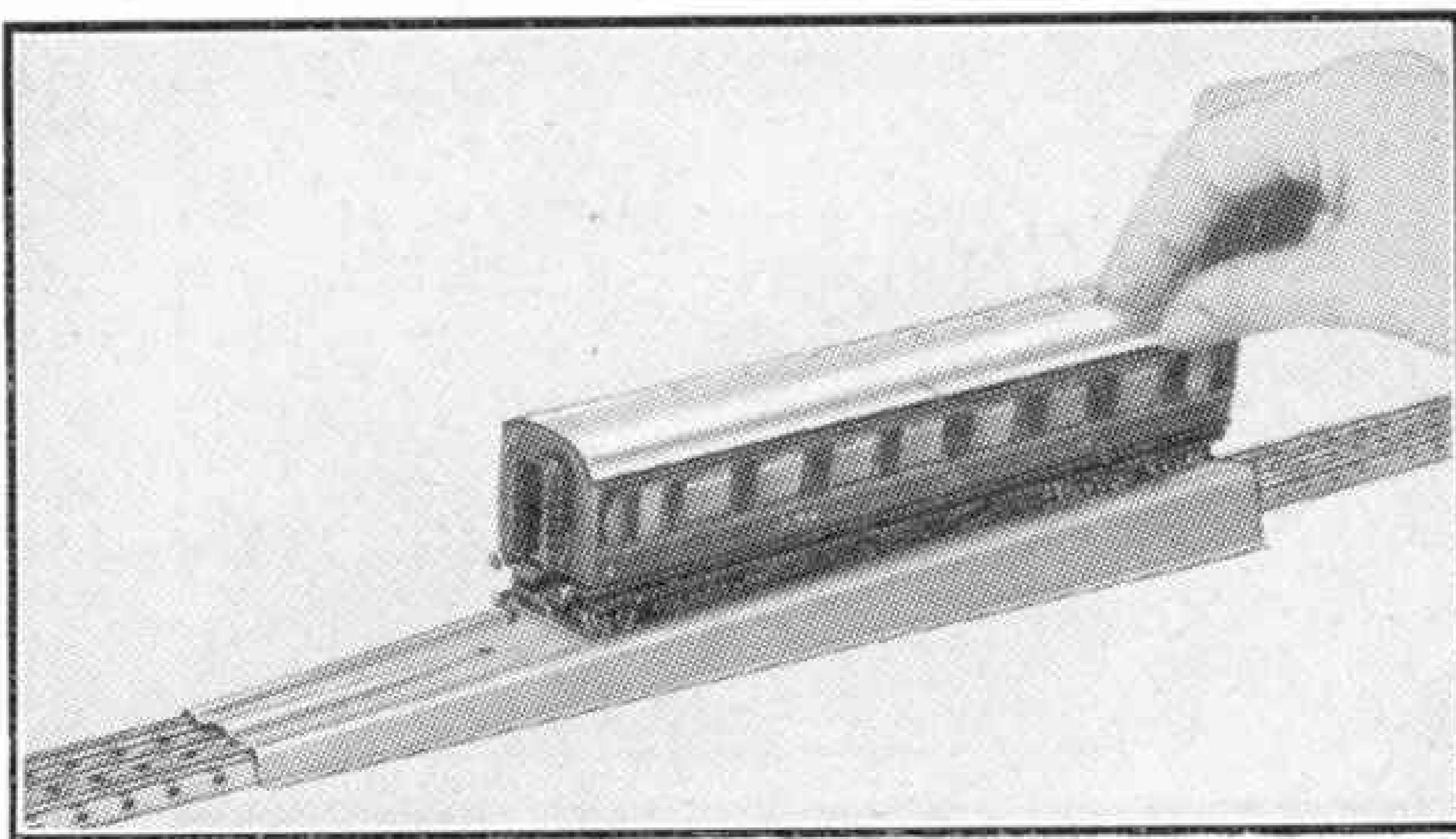
or gadget that makes the job much more easy. Then we say to ourselves "*Why didn't I think of that one? It's so simple.*"

Here is an example of a simple tool of this kind. It is the Hornby-Dublo Railer, a shaped piece of metal that takes all the difficulty out of one of the most elementary operations in model railwaying—that of putting an engine and its train on the track. Enthusiasts will be delighted with it, for its use allows them to fit their trains on the track ready for running more quickly as well as more easily than by any handwork of their own.

The pictures on this page show what the Hornby-Dublo Railer is like and how it is used. Briefly, it is a metal pressing along which run grooves that are wide apart on the top, but are correct rail gauge distance apart at the bottom. It slopes downward and when placed over Hornby-Dublo track it provides an inclined way leading down to the running rails. It is shaped to clear the centre rail.

Railer on to the line, where they are coupled automatically, ready for their spell of running.

The Railer is not only useful when we are beginning train operations. Now and again we may forget to move the points and an engine comes off the line. The Railer is just the thing to allow us to put the train back on the track without delay. It should be kept handy, ready for use, in just the same way as the ramps for re-railing wagons are kept in a neat little stack in many a goods yard.



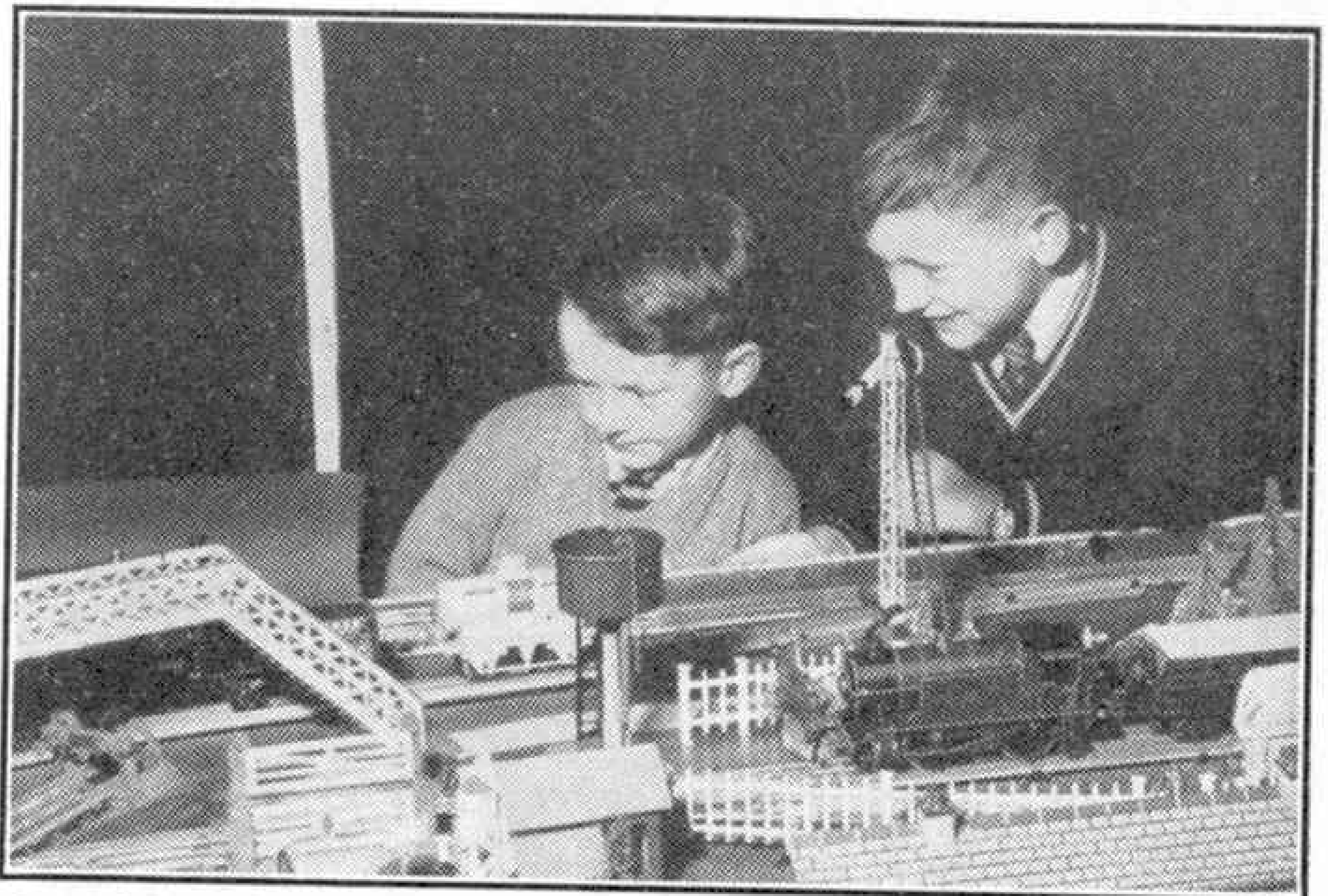
Here is a Coach being placed on the Railer, ready to be run down to the track.

Where the Railway Ends

THE remark has often been made that on certain miniature layouts it is difficult to tell where the railway ends and the surroundings begin. While this is true up to a point, the visitor who is not a miniature railwayman frequently does not realise the effect of space restrictions. More often than not the Hornby or Hornby-Dublo railway planner has considerable difficulty in accommodating even the railway features required for the traffic that he wishes to run, and a certain amount of compression is inevitable.

When there is ample room, and a layout tends to stretch itself all over the place, there should be some sort of border along the lineside in order to define the railway property, and it should not be difficult to arrange this. Fencing or walls are really easy to make, and even with a temporary system they can readily be arranged in sections

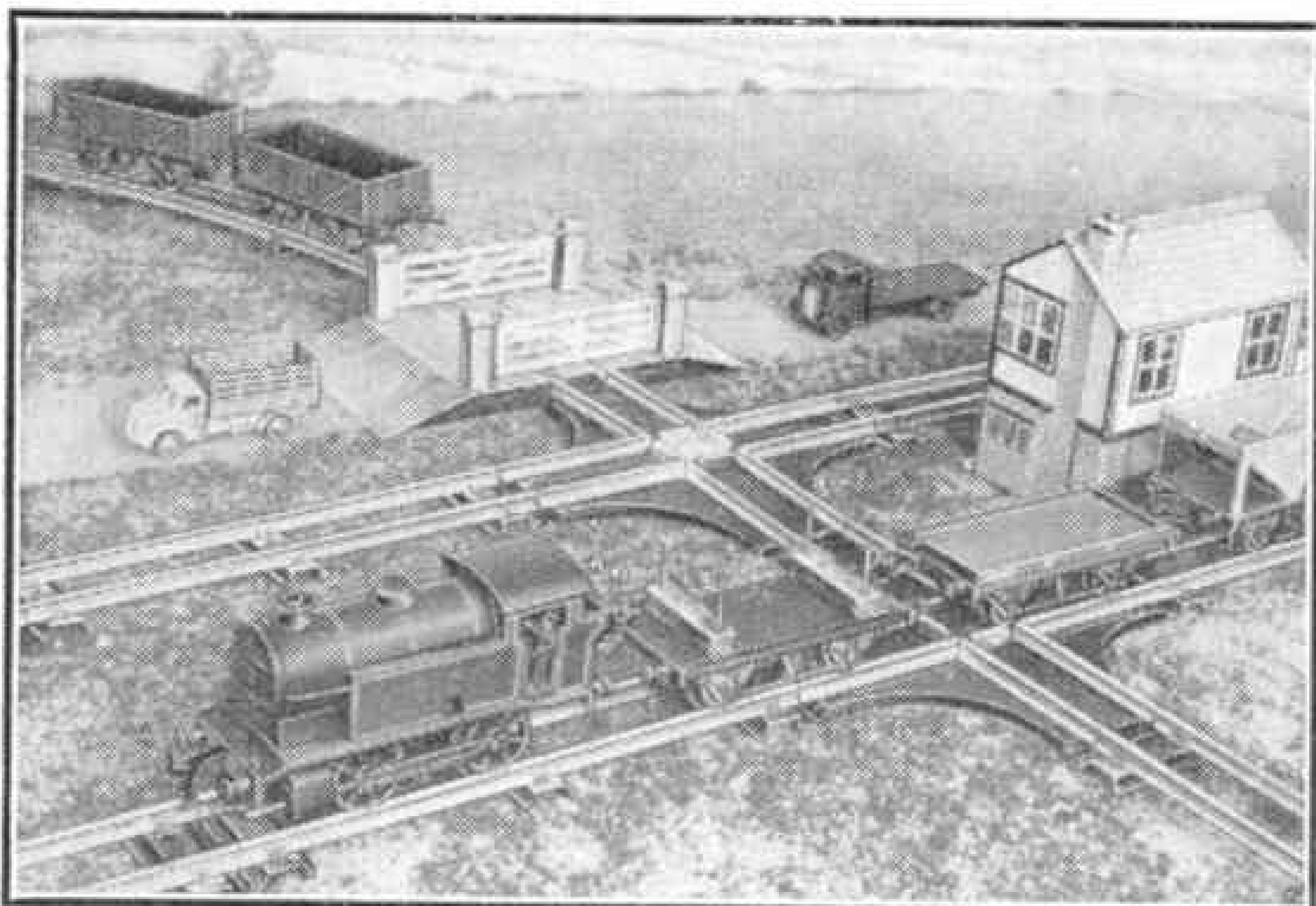
so that they can be cleared up when train running is over. Sometimes there is a tendency for the miniature railway owner who has seized on the idea of fitting up his own fencing to put this in places where it is not really required. For instance, it is not necessary to carry fencing right into the angle formed by



Ian and Barry Corbett watching closely for a train that is due to emerge from the tunnel on their Hornby railway. They have plenty of fun with their system.

Points where two tracks converge, or at Crossings; quite frequently a Signal Cabin or some other railway feature will be needed.

How effective additions of this kind can be made is apparent on the layout seen in the upper illustration on this page. This shows the Hornby railway of Ian and Barry Corbett of Birmingham, who have given careful attention to lineside details and particularly to fencing. The whole system occupies a baseboard 9 ft. by 5 ft. and there are two oval tracks with sidings. These two enthusiasts are fortunate in having the help and interest of their father, Mr. J. Corbett. Indeed, Mr. Corbett freely confesses that he enjoys working on the line just as much as the young "Directors" in charge of it.



Crossings figure prominently in this picture. Track Crossings appear in the foreground, while further back a Level Crossing leads the road over the railway.

How to Build up Your Trains

WHEN the simple oval layout of a Hornby-Dublo Train Set has grown into something more elaborate, with one or two sidings, its owner looks for more

should be arranged with an eye to what is going to happen to them en route. Thus if we have to leave, say, a couple of coal wagons at the first stop down the line, these wagons should be marshalled next to the engine. They are then ready for easy removal from the train.

A mixed train of wagons and vans usually results from the running of a pick-up goods train, that is one that works from station to station picking up and setting down wagons as required. Running trains of this kind correctly on a Hornby-Dublo line provides plenty of bustle and

A through goods with vans next to the engine passes the Signal Cabin. Empty coaches in the background are waiting for further duty.

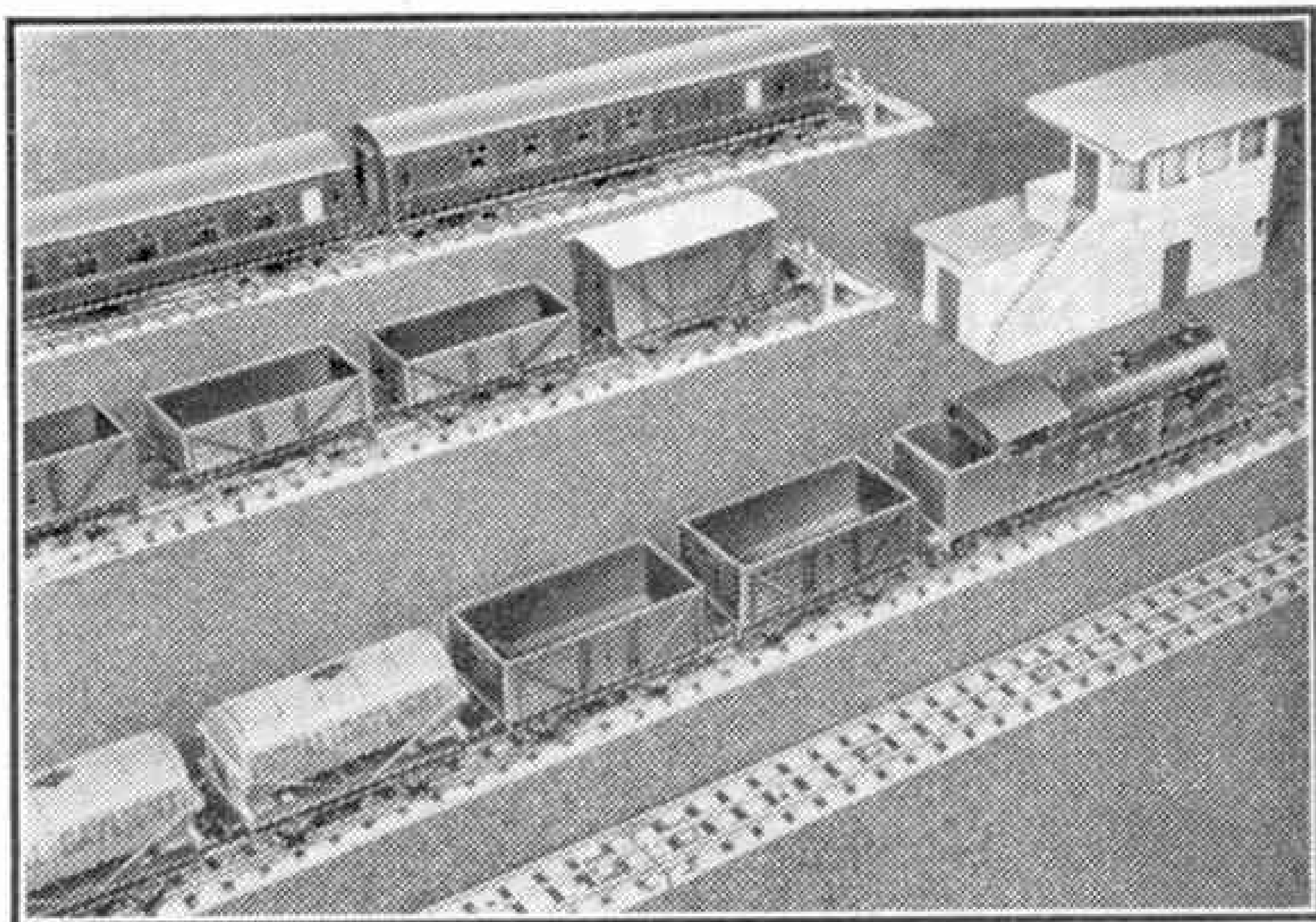
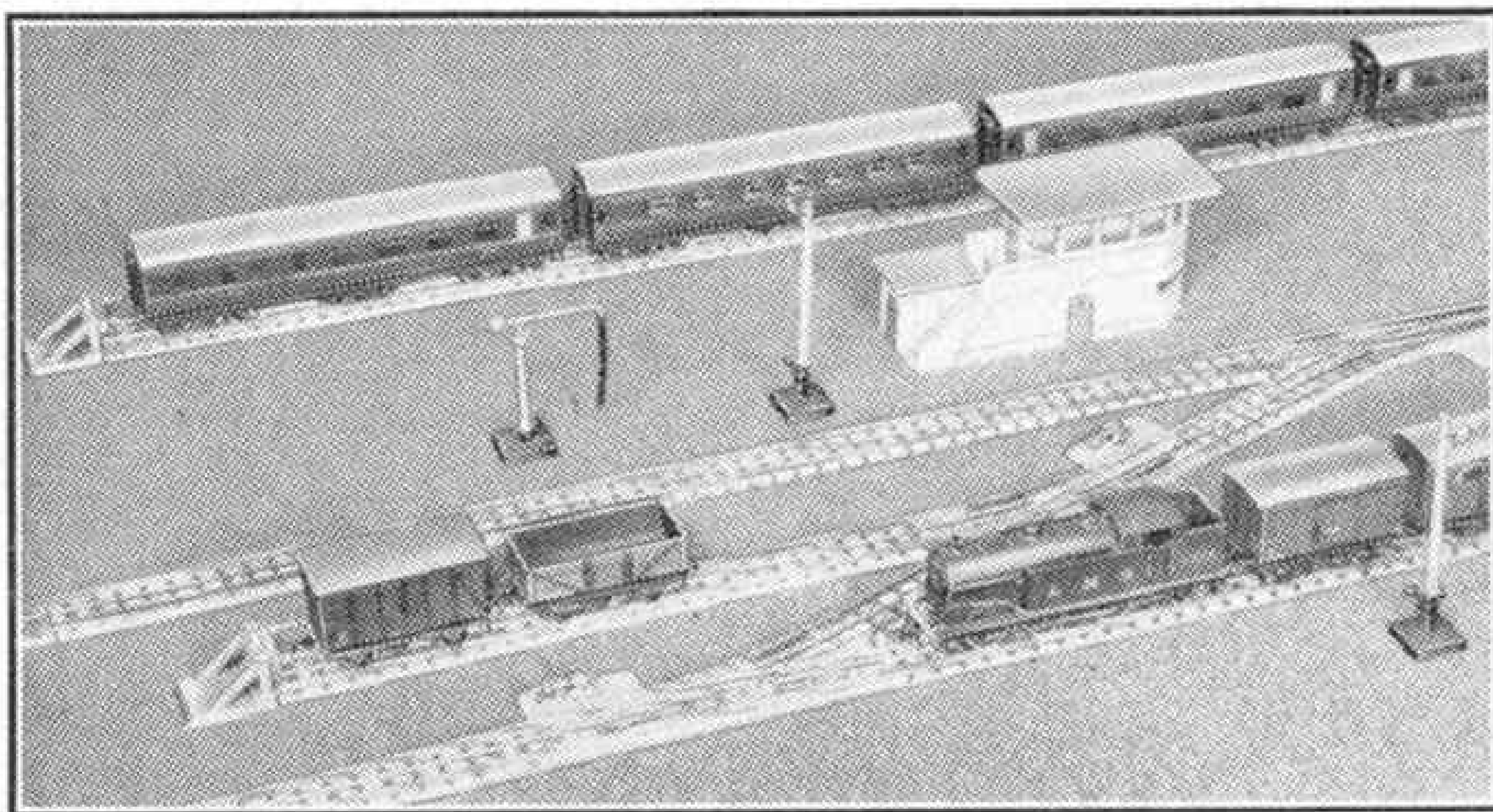
rolling stock so that he can make the best use of his extended track. One great advantage that this gives him is that he can now assemble his trains, both passenger and goods, in the same way as real railwaymen do, especially if he takes care to provide each of his sidings with an Uncoupling Rail. Shunting and train marshalling then becomes really fascinating.

On real railways a train often has coaches for different destinations and there would be trouble and delay if these were not marshalled correctly. Even an ordinary train, one without sections for different towns, requires a little thought in assembly. Such a train should have a brake-third vehicle at each end. Then it has guards' and luggage accommodation at both ends, and therefore requires no re-arrangement for its return journey. Any odd "through" coach that is conveyed, possibly for transfer to a branch line, can be of the brake-third kind.

Goods trains provide more fun because of the greater variety of vehicles and movements. The order of wagons behind the engine

excitement at each stopping place.

For the more important express goods trains we must concentrate the vans next to the engine, as these represent real stock fitted with automatic brakes. In actual practice they assist in the braking of the train on the run, and such trains can run at higher speeds than the ordinary goods. They are becoming more and more important on our railways and over 2,500 of them now run every week.



A selection of Hornby-Dublo rolling stock is seen in this picture. The Tank Locomotive heads a train of empties along the main line.

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For other Stamp Advertisements see also pages 476 and xvi.

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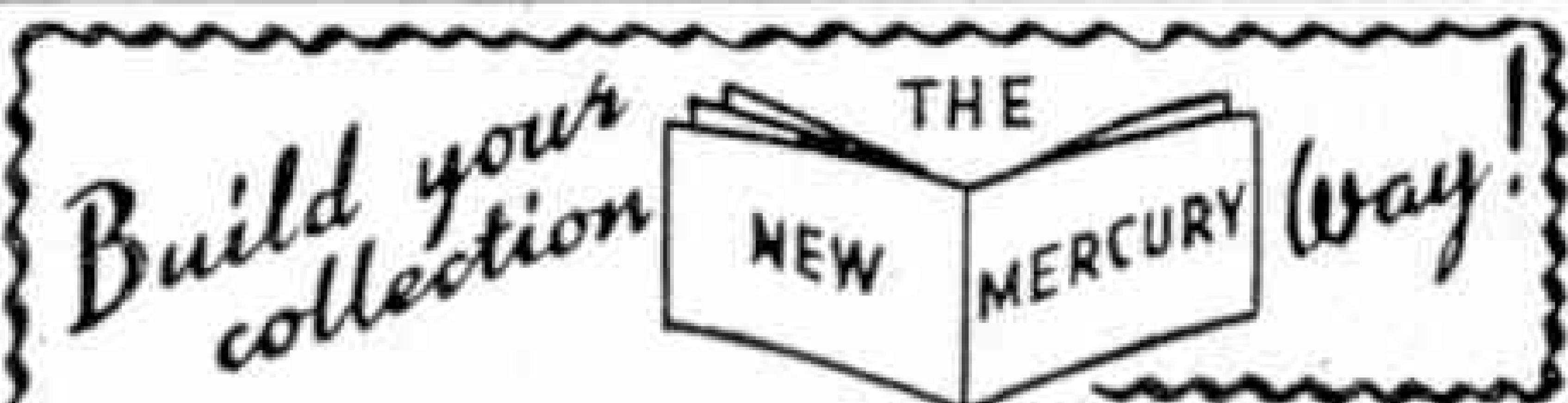
this British Dominion off the East Coast of Canada. This valuable packet of stamps will be sent to you by return of post **ABSOLUTELY FREE**. Just enclose 3d. postage and request one of our famous approval selections. Good discount given. Only one packet to each applicant, so write immediately.

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Stamp Collectors' Corner

By F. E. Metcalfe

THEMATIC COLLECTIONS

LAST month I mentioned that interest in collections based on a theme was growing rapidly. So much so, indeed, that magazines, albeit small and perhaps not very important, are even being published to cater for the needs of collectors who have been attracted by this rapidly growing craze.

I was discussing the matter with an old dealer the other day, and remarked that such collections had nothing much to do with stamps really, for only pictures were being collected. Cigarette cards would serve precisely the same purpose, and cost a lot less.



That is the point, of course, answered the dealer, and if cigarette cards were once more placed in packets, many of these topical collectors,

as they are called in America, would go back to cigarette cards, which was what they were collecting previously.

Perhaps some would return, but on the other hand they must find the pictures on stamps so much more artistic and interesting than those they can find on cigarette cards, and there must be so much more fun searching for them, that the cult is more likely to grow rather than diminish in any case. Moreover governments have now discovered what a demand there is for stamps with thematic designs, and bigger and better pictures seem to be their motto. In support of the cigarette card theory, however, it must be admitted that some of the most popular sets of all have been the fishes and birds set of Portuguese colonies, and these do look for all the world like those little bits of cardboard that the dealer claimed were the first loves of so many who have now come over to picture stamps.

Be all that as it may, one cannot deny the interest that is growing so rapidly. My own post-bag is proof enough and that is why I propose to deal with the subject, for if it is tackled properly there must be an awful lot of fun to be had. Many seem to hold the opinion that the cult is a new one, but it is nothing of the kind. As a matter of fact the finest thematic collection I know



has taken many years to form. This is a collection of ships—ships are still the most popular subjects, though some weird and wonderful themes have been thought up latterly. The owner, with some artistic skill, has embellished the pages that hold his stamps with such elaborate paintings, etc., that the whole



collection arouses the greatest interest wherever it is shown. Even dyed-in-the-wool philatelists seem to get a kick out of it!

While it may be right to say that collections of this kind have little to do really with stamp collecting as such—and nothing to do with philately—they must give their owners an awful lot of fun. To the layman they must be a thousand times more interesting to look at

than those dull conglomerations of dingy old stamps that all look alike to anyone but a specialist. Those philatelists—the very name is a bit silly really—who have perpetrated those highly specialised collections are often given a lot of credit for what they are supposed to have done for the hobby of stamp collecting. Personally, I am of the opinion that on the whole the only ones who may have benefited from their activities have been some of the stamp dealers, which is perhaps the reason why they have received so many pats on the back. There are many stamps that are actually very common, such as the "penny black," but of which these specialists have wanted so many—one collection was said to have contained 90,000 copies, and there are quite a few others with several thousand—that the ordinary collector, with limited funds at his disposal, cannot afford a nice copy.

There is nothing like that about thematic collectors.

They are satisfied in the main with just a single. That is how it should be, for thus we generally get enough to go round and prices are normally within the reach of even young collectors. Good luck to them.

Up to the present not many books have been written on thematic stamps, but they will come. To start with, there are one or two catalogues already on the market that deal with specific subjects. For instance, a catalogue recently published in Italy dealt exclusively with "sports" stamps. In the U.S.A. a book titled "Music on Stamps" has been brought out. While these are not available in Great Britain, they show the trend, and would-be collectors can be sure that before very long such publications will appear on the British market.

Now I have seen a number of so-called topical or thematic collections, formed mostly by juniors. To be quite candid, most of them could be giving very little pleasure either to the collector who had got them together, or to others asked to look at them, which won't do at all.

The real fun of having one of these collections is to have something worth showing to someone else, someone who will say, "Now isn't that interesting?" It can be done and by a junior too, for I saw such a collection only recently. It had perhaps cost about £6 altogether, the album included. Its owner was only 16 years old, and it was so nice that it made me decide that I wanted to form one myself.

How was it formed? Well I will tell you next month, and I will also try to put you on the right lines for forming another one like it.



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Please enclose 2½d. stamp for postage to you, and post without delay, addressed to

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Mention the Meccano Magazine.

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For other Stamp Advertisements see also pages 474 and xvi.



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is one of the most popular countries among stamp collectors. You must therefore have two of her finest stamps. This month all genuine approval applicants will receive **FREE** the unused Princess Elizabeth's marriage stamp and the used 5/- Commonwealth coat-of-arms. Enclose 2½d. post. **H. B. LANG, BURNBANK, MAUCHLINE, Ayrshire**

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FREE—STAMPS CATALOGUED 5/- to applicants for ½d. approvals.

COX, 17, STONELEIGH PARK ROAD, EWELL

Stamp Gossip

JAMAICA

YOU have seen this 3d. stamp before, and of course you have got a copy in your collection. But what colour is it? Make sure you have got one with the green centre and red frame that appeared on 1st July, for some unaccountable reason.

The stamp first appeared in December 1938. The centre was then ultramarine and the frame green. The first change occurred in August 1949, when the centre became green and the frame ultramarine. Now we have the second change, and as the present form



will have a life of only a few months, make sure of your copy while it is current. Don't expect that it will ever

be a rarity, for Jamaica stamps are far too popular, and far too many collectors in consequence want them. I am making sure of my copy anyhow, for this is my favourite stamp in all the K.G. VI group, only I cannot quite make up my mind in which combination of colours I like it best. Perhaps the first one.

DISPUTED TERRITORY

It is possible that one day we may get what the Americans call a show-down, not in China, but away at the foot of South America, for it would appear from newspaper reports that the Argentine is busy staking one claim after another in the part of Antarctica that Great Britain claims as part of the British Commonwealth. The plan seems to be to lay a philatelic claim also, and I am illustrating the third 1 peso stamp that has been part of this little game.

As long ago as 1936 Argentina brought out a 1 peso stamp that not only showed the Falkland Islands as part of their territory, but included also part of Chile. The latter country protested and the following year the design was amended to exclude the portion of Chile, but our Colony was left in. Now this third stamp makes a larger claim than ever. Saying it with stamps will hurt no one, but will it end there?

HAIL CANADA!

I mentioned recently how popular "Red Cross" stamps were, though we get very few specimens among Commonwealth issues. This being the case, the announcement of one for Canada has caused quite a commotion among British collectors.

The illustration shows that Canada has once more produced a fine design. The stamp was issued on 26th July and its object is to commemorate the



18th International Red Cross Conference, which opened in Toronto on the day the stamp appeared. It is not as big as the illustration, by the way.

For a long time Canada's stamps have been printed by the recess process, but new methods of printing have been employed on this red and blue stamp. The background is blue and the cross of course red. No wonder Canadian stamps are so popular when the Post Office produces such well designed stamps.

BE PREPARED

What fun QE collectors seem to be in for in a few months! Soon I'll have to be writing those notes I promised. Meanwhile you must be getting around Uncle Joe for that new album. It is going to be needed before very long, but if you are already a K.G. VI collector, of greater urgency still is the filling up of those blanks, for with the new buying season ahead, the demand is going to make many jump before very long.

RUSSIAN BEAR



A reader thinks that I don't like Russian stamps very much, because I never mention them. Just to prove that there is nothing in this idea, I am asking the Editor to illustrate one that came off a letter a friend received recently. I have nothing against Russia or its stamps. The fact is that there is only room to mention one or two stamps a month, so I like to confine my notes to stamps that all readers are likely to be

able to get hold of easily. Real pukka stamps, which are printed for use as well as ornament, not to mention collector's pocket-money. It has got to be admitted that very few of the fancy and often very handsome stamps of Russia are ever intended for postal use.

But I can hear some collector say, these Russian stamps are obtainable at a lower price used than mint, so they must serve postal purposes. Nothing of the sort. Sheets are postmarked to order by the Russian Authorities and jobbed off at low prices. They are all right as pictures, but really they have not much more postal status than cigarette cards. The one illustrated has done its postal duty, however.

WHICH WILL BE FIRST?

Recently in Parliament we were told that Great Britain would have the first Queen Elizabeth stamps on sale by the end of the year. From this it might be thought that here at home we might be first in the field, but a correspondent in Canada tells me that the designs have been passed and printing is ready to begin, if it has not already started. So it would seem that Canada may be the first. In the case of this Dominion the only stamps likely to bear the Queen's portrait will be those up to 5c.

Competitions! Open To All Readers

Prize-winning entries in "M.M." competitions become the property of Meccano Ltd. Unsuccessful entries in photographic, drawing and similar contests will be returned if suitable stamped addressed envelopes or wrappers are enclosed with them.

Stations in the Story

THE railway station is a centre of attraction for the train enthusiast and the names of many of our bigger terminal or junction stations are practically household

words. The very mention of Waterloo, York or Crewe suggests a maze of points and crossings over which trains pick their devious ways. The atmosphere at many other stations is less bustling of course, but every station, large or small, has its attractions for those who like watching the trains.

The following little story includes the names of seventeen stations. Read the story and then see how many you can find.

John Green walked along Hall Road; he was on his way to catch a train to town. Glancing up at the church tower he discovered from the clock face that he had twenty minutes yet. As he proceeded along Broome Street, John thought of ways of keeping warm, as it was a cold day in March. Playing with bat and ball would perhaps be a good idea, although the cricket season had not yet started. "At least," he thought, "it is warmer here than on the sandhills."

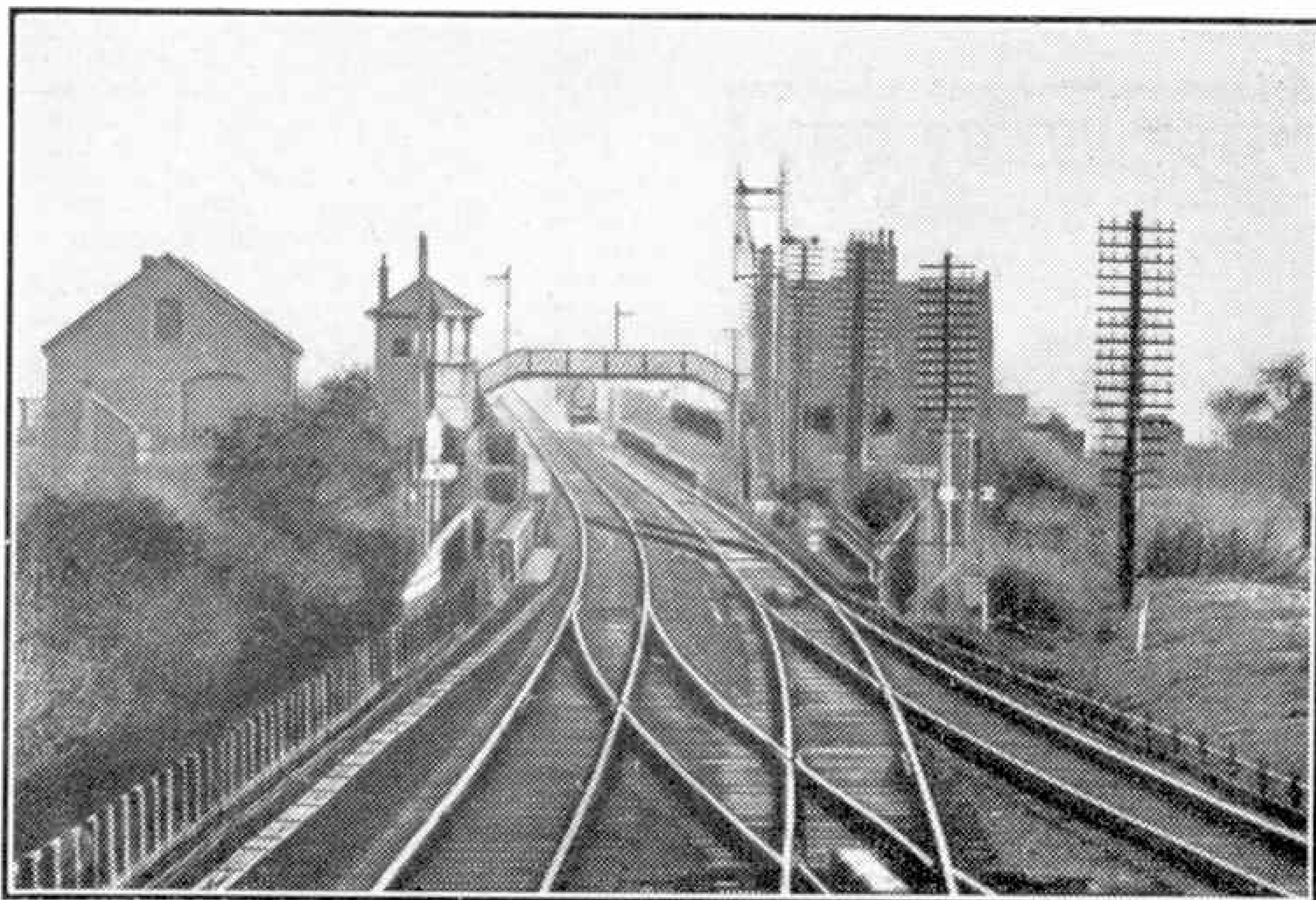
At the Woodland Hotel John crossed the road, noting as he did so a statue of Wellington nearby. He arrived at the station with a few minutes to spare and happened to meet Nelson Smith, an old friend who had just returned from Gretna. Together they boarded the train, and on the short journey conversed on several subjects, including sports such as cricket, football and rugby.

The friends parted on leaving the train, Smith going towards St. John's Chapel in Old Street, while John walked along in the direction of the fish ponds. Passing the barracks he heard the notes of a bugle. At the new mills he turned right and finally arrived at his destination.

Now make a list of the station names and forward it to *Railway Stations Contest*,

Meccano Magazine, Binns Road, Liverpool 13. Do not forget to include your name, address and age on your entry.

As usual there will be two sections, for



A border station that figures in the competition story on this page. It lies at the junction of two important main line routes. British Railways (Scottish Region) Official Photograph.

Home and Overseas readers respectively, and in each prizes of 21/-, 15/- and 10/6 will be awarded for the best entries, with consolation prizes for other good efforts. If there is a tie for any prize the judges will take neatness and novelty into account.

Closing Dates: Home Section, 29th November; Overseas Section, 28th February 1953.

October Photographic Contest

The tenth of our 1952 series of photographic contests is a general one in which we invite readers to submit prints of any subject. Each competitor may submit only one photograph, which must have been taken by him, and on the back of his print must be stated exactly what the photograph represents; also his age must be given.

The competition will be in two sections, A for readers aged 16 and over, and B for those under 16. Each competitor must state in which section his photograph is entered. There will be separate overseas sections, and in each section prizes of 21/-, 15/- and 10/6 will be awarded. Entries should be addressed *October Photographic Contest, Meccano Magazine, Binns Road, Liverpool 13.* Closing dates: Home Section, 31st October; Overseas, 31st January 1953.

Competition Results and Solutions

HOME

JUNE 1952 GAMES CONTEST

1st Prize: N. Henson, Birmingham 24. 2nd Prize: K. A. Stothard, Sunderland. 3rd Prize: C. L. W. Minlay, Edinburgh 12. Consolation Prizes: R. Dodd, Sutton Coldfield; H. Cohen, Keswick; I. R. Davies, Wolverhampton.

JUNE 1952 RAILWAY CONTEST

1st Prize: J. A. Heywood, Macclesfield. 2nd Prize: J. Allen, Wolverhampton. 3rd Prize: J. T. Smith, Birmingham 28. Consolation Prizes: A. Smedley, Darley Dale; John Kettle, Birmingham 31; John A. Hall, Woodley.

JULY 1952 PHOTOGRAPHIC CONTEST

1st Prize, Section A: R. K. Evans, Hesse; Section B: J. R. Wakeford, Solihull. 2nd Prize, Section A: W. J. Hackett, Aberdeen; Section B: G. D. Parkin, Hampton. 3rd Prize, Section A: Miss B. M. Ruth, Tunstall; Section B: C. Dewis, Loughborough. Consolation Prizes, Section A: D. R. A. Coan, London E.8.; H. C. Hirst, Menston; N. E. Mitchell, Gloucester; S. Redhead, Hull; D. J. Sims, London W.13.; Section B: H. de V. Welchman, Newton Abbot; R. Goodfellow, Sheffield; R. Gregory, Doncaster; D. Lewis, Yiewsley; W. B. Prince, Chester.

OVERSEAS

FEBRUARY 1952 LOCOMOTIVE CONTEST

1st Prize: J. Phillips, Napier, N.Z. 2nd Prize: J. Sneddon, Somerville 45, U.S.A. 3rd Prize: K. W. Turton, East Malvern, S.E.5., Australia. Consolation Prizes: I. Jones, Melville, Australia; A. H. Trevorrow, Petone, N.Z.; A. Humphrey, Winnipeg, Canada.

FEBRUARY 1952 PHOTOGRAPHIC CONTEST

1st Prize, Section A: T. P. Mansergh, Tirau, N.Z.; Section B: J. Hunt, Sliema, Malta G.C. 2nd Prize, Section A: N. P. Sangarneria, Calcutta 6, India; Section B: P. H. Veiriere, Antwerp, Belgium. 3rd Prize, Section A: H. O. Ekwensi, Minna, Nigeria; Section B: N. Rowse, Johannesburg, S. Africa. Consolation Prizes: H. B. Smith, Maynooth, Irish Republic; L. Jones, Durban, S. Africa; D. McKenzie, Christchurch, N.Z.

MARCH 1952 CROSSWORD PUZZLE

1st Prize: L. R. Dickson, Pretoria, S. Africa. 2nd Prize: A. Cornhill, Alexandria, Egypt. 3rd Prize: R. J. Boland, Tipperary, Irish Republic. Consolation Prizes: J. A. Stoupe, Auckland, N.Z.; J. S. Manduca, St. Julians, Malta G.C.; G. S. Jost, Corio, Australia.

MARCH 1952 AIRCRAFT CONTEST

1st Prize: R. J. McDowall, Dunedin, S.W.1., N.Z. 2nd Prize: E. M. Lawler, East Gordon, Australia. 3rd Prize: N. A. Boulter, Elizabeth, N.J., U.S.A. Consolation Prizes: B. Riley, Dublin, Irish Republic; S. Langridge, Sydney, Australia; M. A. Hall, Christchurch, N.Z.

MARCH 1952 PHOTOGRAPHIC CONTEST

1st Prize, Section A: G. Bell, Melbourne, Australia;

Section B: B. Natarajan, New Delhi, India. 2nd Prize, Section A: S. Foster, Kansas, U.S.A.; Section B: D. E. Pidgeon, Durban, S. Africa. 3rd Prize, Section A: L. C. Le Roux, Cape Town, S. Africa; Section B: J. Poynton, Waterford, Irish Republic. Consolation Prizes: M. A. Stevens, Invercargill, N.Z.; M. R. A. Pratt, Rondebosch, S. Africa; A. Rhodes, Otaki, N.Z.; D. Gould, Dunedin, N.Z.

APRIL 1952 PHOTOGRAPHIC CONTEST

1st Prize, Section A: P. Johnstone, Melbourne, Australia; Section B: W. O. Sandys, Manhattan, U.S.A. 2nd Prize, Section A: R. F. James, Adelaide, Australia; Section B: J. A. Harvey, Toronto, Canada. 3rd Prize, Section A: H. Owens, St. Albans, N.Z.; Section B: D. Mann, Limerick, Irish Republic. Consolation Prize: R. McArthur, Graymouth, S.I., N.Z.

APRIL 1952 FOOTBALL STORY CONTEST

1st Prize: E. Brockie, Dunedin, N.Z. 2nd Prize: K. Smith, Riviera, S. Africa. 3rd Prize: J. A. Horne, Toulouse, France. Consolation Prizes: T. M. Seager, Bombay, India; B. Holmes, Lisbon, Portugal; D. J. Ackers, Sydney, Australia; N. Russell, Geraldine, N.Z.; J. M. Sykes, Johore, Malaya.

APRIL 1952 SIGNALLING CONTEST

1st Prize: P. Farrell, Buenos Aires, Argentina. 2nd Prize: J. A. Gomes, Bombay, India. 3rd Prize: B. D. Williams, Madrid, Spain. Consolation Prizes: J. Saunderson, Madras, India; R. J. Walls, Johannesburg, S. Africa; L. Nicholls, Invercargill, N.Z.

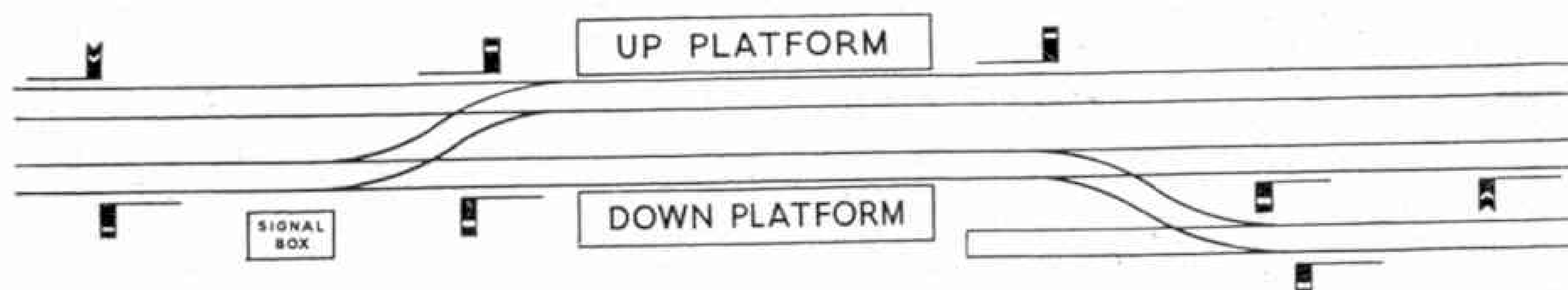
MAY 1952 PHOTOGRAPHIC CONTEST

1st Prize, Section A: H. Knowles, Port Said, Egypt; Section B: C. V. Love, Amsterdam, Holland. 2nd Prize, Section A: A. F. Neilson, Pleasant Point, N.Z.; Section B: K. I. Jackson, Valetta, Malta, G.C. 3rd Prize, Section A: H. Arnold, Dublin, Irish Republic; Section B: D. S. Taylor, Pretoria, S. Africa. Consolation Prizes, Section A: N. G. Jayaram, Bangalore, India; P. Keely, Dublin, Irish Republic; F. G. Leech, Montreal, Canada; L. Coles, Brussels, Belgium; N. White, Berne, Switzerland; Section B: D. Scholtes, Waterloo, Canada; K. Truter, Queenstown, S. Africa; V. Char, Bombay, India; D. Harper, Pretoria, S. Africa; M. Rudling, c/o. No. 7 Pumping Station, E. S. Railway, Australia.

SOLUTIONS

MARCH 1952 AIRCRAFT CONTEST

1. De Havilland "Comet," British; air liner. 2. Fairey "Gannet," British; carrier-borne anti-submarine duties. 3. Vickers Armstrong "Valetta," British; troop transport. 4. Avro "Ashton," British; high altitude research. 5. Handley Page "Hermes," British; air liner. 6. Percival "Prentice," British; R.A.F. basic trainer. 7. Martin "Marlin," flying boat, U.S.A.; anti-submarine, search and strike duties. 8. De Havilland "Drover," British; air liner (feeder line in Australia). 9. Miles "Aries," British; private/club 4-seater. 10. De Havilland "Heron," British; air liner for feeder line duties. 11. Fairchild "Packet," U.S.A.; military transport. 12. Avro "York," British; heavy transport.



April 1952 Signalling Contest Solution.

A Fascinating Hobby—(Continued from page 435)

evening run. The driver and fireman, a couple of Scots from Corkerhill, were not insensitive to the beauties of the scene, although they had other things to attend to.

It is a tantalising fact that the most attractive railway scenes are beyond the power of the camera to portray. I suppose this is true of all that is impressive and beautiful. The scene makes an impression that is a compound of so many things not to be seen by the eye: to do justice to them would need the skill of poet or painter. Yet the photographer persists, in the hope that one day he will achieve a picture that will capture the mystery of the scene. I am sometimes criticised for returning again and again to the same locations. In part the reason is that certain of them have the advantage of accessibility and convenience, but far more it is that some of these locations possess an atmosphere that I have never yet managed to make visual in a picture. Perhaps I never shall, but it is exciting to keep on trying.

White Owls for Weather Forecasting—

(Continued from page 441)

He's been regretting it ever since, we think.

We refuse to be downhearted about such rebuffs. Even now we are planning, come next Summer, to offer the services of our weather consultants to local football coaches. An advance look at the approaching Autumn will enable the coaching gentry to decide whether to concentrate on wide-open, dry-field stuff, or on a power attack that goes well with mud.

After all, these weathermen have one thing in common with football coaches. Each has his own system for achieving successful results. This year, for example, in addition to the white-owl and geese systems, we have one man who predicts according to the height of muskrats' houses, another who depends upon which way the new moon is tilted, still another on how badly his father's bones ache. Yet they all come up with the same answers.

Thus far, however, we have been disappointed in one thing: No one yet has admitted to predicting on the basis of how much wood the white man is laying in for the Winter.

Among the Model-Builders—(Cont. from page 465)

A 1" x 1/2" Angle Bracket 9 prevents the Motor from being reversed. Adjustment of the switch mechanism is made by altering the positions of the Swivel Bearing 18 on the Rod 20, and the Coupling 12 on the Rod 15.

The mechanism operates as follows. Starting with the Motor "off" and the weight raised, the drum is rotated by the falling weight 28. Gear Wheel 7 is stationary; the Pinions 32 riding round its periphery rotate the Gear Ring 2, so driving the "fan" 1. When the weight nears the end of its travel it pushes down Rod 27 and so depresses the Slotted Strip 11. Owing to the slot in this Strip the Motor is not switched on until the Rod 20 passes the horizontal position. Then it is snapped on by the Springs 24. The Motor then rotates Gear Wheel 3 in the opposite direction to the drum and at a faster speed, so that while Pinions 32 are still riding round the Gear Wheel 3 and driving the Gear Ring, the drum is reversed and the weight rises until it pushes up Rod 29 and stops the Motor.

Himalayan Airlift—(Continued from page 437)

a staple food here, all kinds of vegetables including chillies; and cows and other live stock, which were driven aboard in the manner of cattle into a byre, with heavy equipment from jeep to a small steamroller, bags of cement and drums of steel wire.

I had one unpleasant experience with a cargo of steel wire. Flying at about 14,000 ft., the Dakota ran into extreme turbulence, with the result that the lashing ropes broke and three 2,000 lb. drums began to shift, making the landing at Skardu even more exciting than usual.

The question is often asked: What would happen in the event of engine failure when flying over this type of country? On three occasions so far one engine has "cut" when we were sufficiently near Gilgit to make a landing. But there could have been only one result had the weather been other than favourable—*finis!* In the circumstances it is somewhat creditable that the Gilgit Airlift has so far flown 10 1/2 million passenger-miles without loss.

There is little possibility of this part of the world being developed industrially. It will remain as it has always been, a wilderness of towering rock with a scattered population of happy-go-lucky shepherds and farmers. And the Gilgit Airlift will almost certainly be discontinued when the problem of Kashmir is solved.

EXHIBITION OF RAILWAY PHOTOGRAPHY

An Exhibition of Railway Photography will be held at Railway Executive Headquarters, 222, Marylebone Road, London N.W.1, from 6th-11th October 1952 inclusive. It will be open from 11 a.m. to 8 p.m. daily, and admission will be free. The Exhibition has been organised by the Railway Correspondence and Travel Society in association with the Railway Photographic Society, and copies of the Exhibition catalogue, which will be on sale at the above address, price 1/-, can be obtained in advance from the R.C. & T.S. Publications Officer, 18, Holland Avenue, Cheam, Surrey, price 1/3 including postage.

The Exhibition will be well worth a visit, and readers who are interested in railway photography and can get there should make a special effort to do so.

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Readers who are photographic enthusiasts should note that the Photographic Apparatus and Accessories Division of Johnsons of Hendon Ltd. has been transferred to larger premises at Apparatus House, 35 and 37, Brent Street, Hendon, London N.W.4. All orders and letters referring only to photographic apparatus and accessories should be sent to this new address.

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From Our Readers

This page is reserved for articles from our readers. Contributions not exceeding 500 words in length are invited on any subject of which the writer has special knowledge or experience. These should be written neatly on one side of the paper only, and should be accompanied if possible by original photographs for use as illustrations. Articles published will be paid for. Statements in articles submitted are accepted as being sent in good faith, but the Editor takes no responsibility for their accuracy.

THE WENVOE TELEVISION MAST

What will be the most powerful of the B.B.C.'s television stations, that at Wenvoe, near Cardiff, was opened on 15th August. Work on the foundations began in March 1951, and the erection of the steelwork in January of this year. It was finished within five months.

The mast was built to B.B.C. specification by British Insulated Callender's Construction Company. It weighs 140 tons and is 750 ft. high. This height is made up of 610 ft. of steel lattice mast of triangular section, a 100 ft. cylindrical part that would form a Very High Frequency aerial for sound broadcasting should this system ever be adopted at Wenvoe in the future, and a top mast 40 ft. high carrying the two tiers of vertical dipoles that form the combined sound and television aerial.

The mast is stayed at each of four levels by three steel ropes, the circumferences of which range from $4\frac{7}{8}$ to 6 in. The longest is 860 ft. Together they would weigh more than 21 tons, and they will stand a strain up to 210 tons.

The total downthrust, that is the weight of the mast together with the pressure of the stays, is 336 tons. The base of the mast is supported by a rocker bearing which consists of two steel plates. One of these is flat and fixed to the mast; the other has a convex face and is welded to a steel pedestal. Between these plates, in a spherical recess, is a steel ball two inches in diameter. This is the focal point through which horizontal shear stresses are transferred to the foundation.

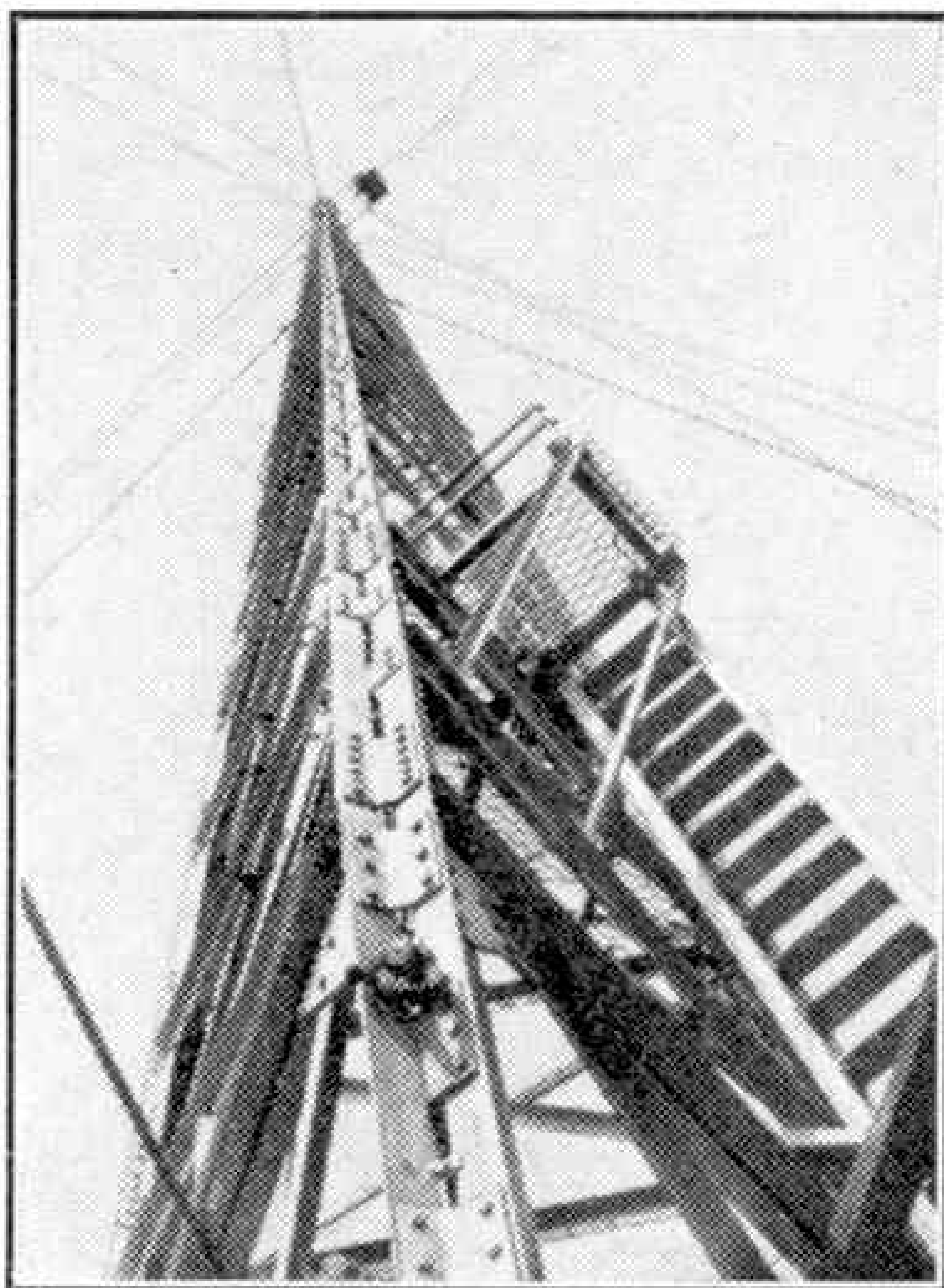
The mast is capable of withstanding the strain created by a 120 m.p.h. gale at the top, or an 80 m.p.h. wind at the bottom. In these conditions its top would move 7 ft. 6 ins. from the perpendicular.

W. G. ROBERTSON (Penarth).

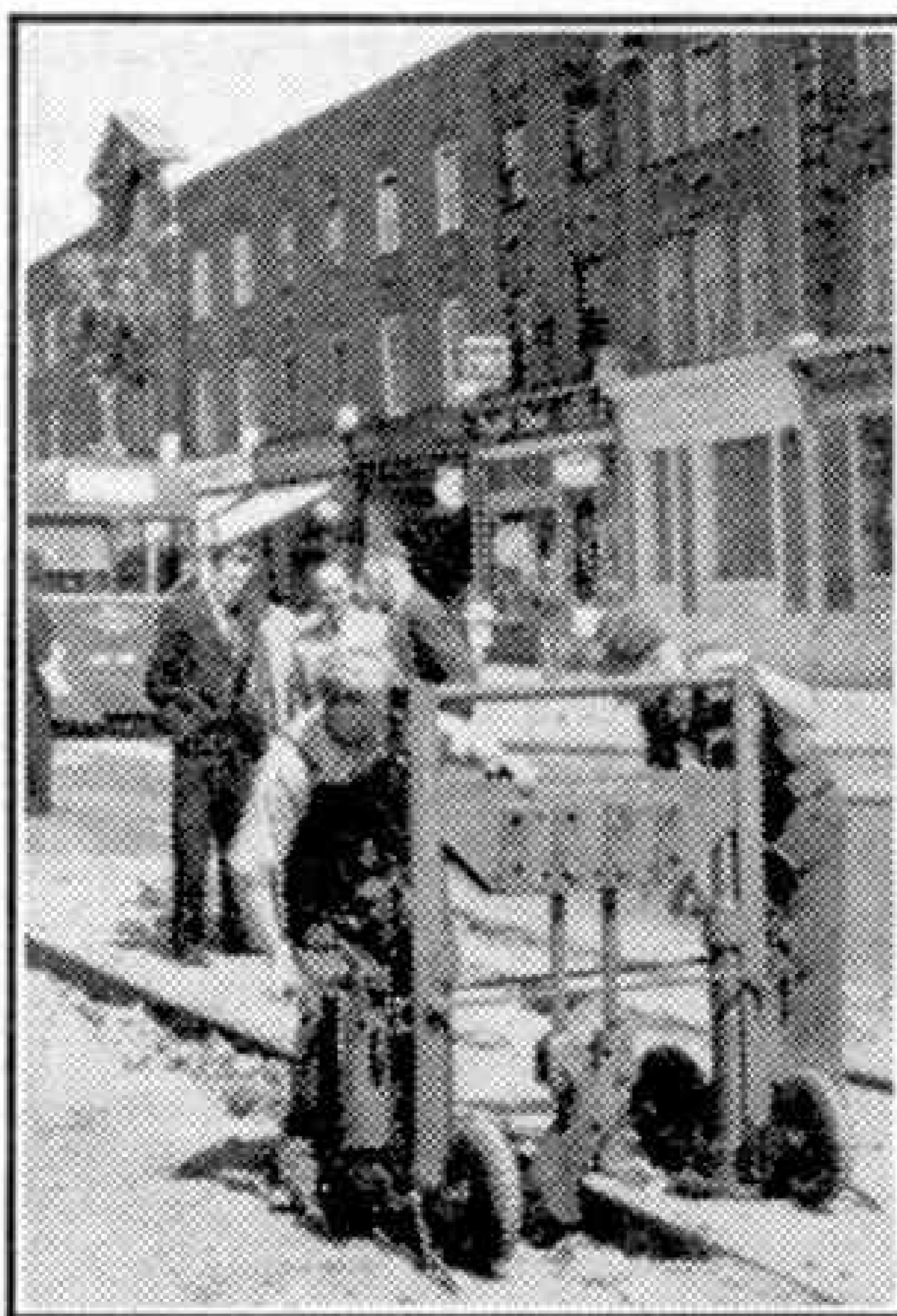
REMOVING TRAM RAILS

The lower illustration on this page shows a machine that is used for extracting old tramlines from the road. The power is hydraulic, with oil as the medium, and the machine is hand operated by two men.

I saw it being used at the



The mast of the new television station at Wenvoe, near Cardiff. Photograph by W. G. Robertson, Penarth.



Removing disused tram rails in North Croydon. Photograph by J. Lineman, Thornton Heath.

time of writing in North Croydon, Surrey, where rails were being removed and the road re-made after the scrapping of the tramway system.

It is interesting to watch the machine at work. Men with pneumatic drills take out just enough of the road, at intervals of about eight feet, to enable the grabbing apparatus to get a grip on the rail, and then the pumping commences. From my observation the labour of using the pumps is no harder than that of inflating a cycle tyre. I made three time tests and found that on the average it takes a minute and three quarters from the commencement of pumping to the rise of the rail free of the road.

J. LINEMAN (Thornton Heath)

FLYING FOXES

Owing to large bush fires that occurred this year in Queensland and New South Wales, flying foxes that usually inhabit areas in those states were driven southward and these entered Victoria. Bats are traditionally associated with horror, but they are completely harmless in themselves. This invasion was outstanding, however, because the flying foxes did considerable damage to orchards.

The flying fox is a unique member of Australia's family of living creatures and is given its name because of its resemblance to a fox in appearance. It forms large "camps" and usually thrives in tropical and sub-tropical regions, although some favour more temperate climates. This species is responsible for heavy fruit losses in South Gippsland, in the eastern part of Victoria. They lived in "camps" of 10,000 or more, and invaded fruit crops at night time. Many have been seen by residents.

The wing span of some of these bats measures up to nearly four feet—only a foot less than that of the Kalong of Java, largest of all living bats. Man is their greatest enemy but there are natural foes as well. Crocodiles, goannas, pythons and eagles all take their toll, though they are not very effective checks on the increasing bat population. British bats are not so large as these fruit-eating creatures. The largest has a wing span of about 14 in.

JOHN SKELTON

(Yarram, Victoria).

Fireside Fun

"Bill and I are in partnership, but we don't sell the same things."

"That's strange, isn't it?"

"Oh, no. I sell a polish that stains the fingers, and Bill follows up next day with the only soap that will wash it off."

* * *

"Daddy, did you know a black hen is cleverer than a white one?"

"Don't talk nonsense, Hubert."

"But it is, daddy. It can lay a white egg, but a white hen can't lay a black one."

* * *

"Yes, he's had a lot of trouble with microcythemia."

"Poor chap! Long illness, I suppose?"

"Not at all. He couldn't spell it."

* * *

"Glad I wasn't born in Zululand."

"Don't you like the place?"

"No, but I can't speak Zulu."

* * *

"I've just found a twig in one of the cakes I bought from you."

"Naturally. We have branches everywhere."

* * *

"Cricket seems to be awfully difficult," said Aunt Jane with a sigh.

"What makes you think that?" asked Johnny in surprise.

"Well, it appears to be full of catches."

* * *

"Now boys, I want you to write an essay on manners," announced the unpopular teacher.

"Please, sir, may I write on bad manners?" asked the clever boy of the class.

"Certainly, Smith. Just write about what you know best."

* * *

"Do men ever go to heaven, mother?"

"Of course, dear. Why do you ask?"

"Well, I've never seen a picture of an angel with a beard or moustache."

"H'm. Perhaps they only get there by a close shave."

* * *

Sandy was helping to build houses, carrying bricks up ladders, when the minister came along.

"Hello, Sandy," he said. "I hear your brother Alec has passed his exams and is a real doctor now. Isn't it strange how unevenly talents have been divided in your family?"

"It is that, Sir," agreed Sandy, shouldering his hod. "Poor Alec couldn't do this to save his life."

* * *

"From this tee you drive your ball as near as you can to that flag on the green," said the golfing expert to the novice; and to the amazement of the expert the novice drove right into the middle of the green.

"What do I do now?" he asked.

"Oh, just knock it into the hole," replied the expert weakly.

"Knock it into the hole? exclaimed the novice wrathfully. "Why didn't you tell me that when we started?"

* * *

"I see this store has a man teaching people to play golf in the games department. Shall we go?"

"You go. I learned yesterday."

BRAIN TEASERS

PUZZLE WITH THE RIGHT END

Here is a square that should consist of five words, each of five letters. The five vowels occur diagonally in this square, as can readily be seen.

A
.	E	.	.	.
.	.	I	.	.
.	.	.	O	.
.	.	.	.	U

Here are clues to the five missing words: 1, part of the body; 2, a common tree; 3, a small boat; 4, often the answer; and 5, goodbye! C.H.

* * *

VOWELS MISSING THIS TIME

Below are four lines of poetry that should be well known to readers, but all the vowels have been taken out, leaving only the consonants.

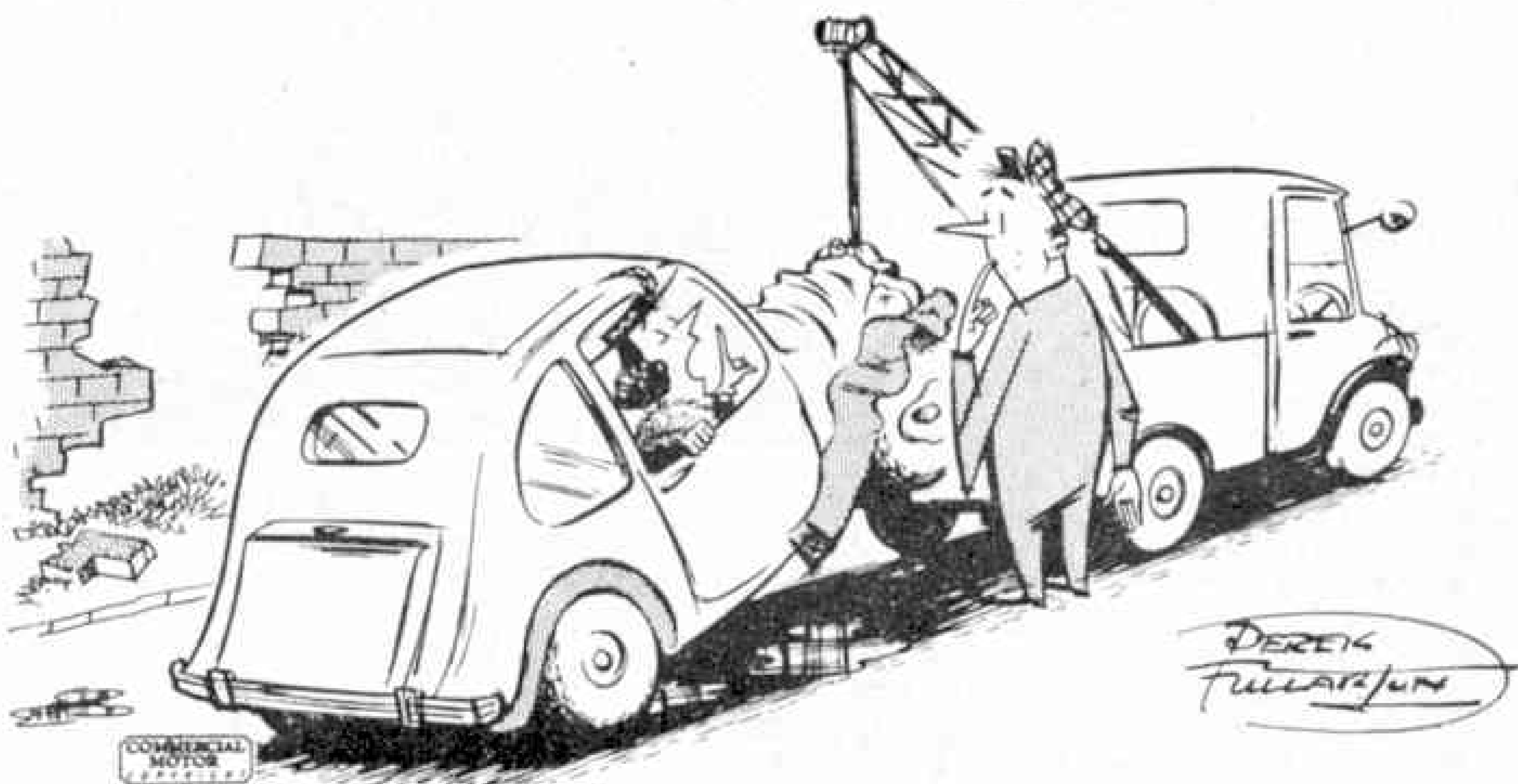
Jhnglpnwsetzn
fcrdtnrwn.
trnbndcptnkwh
ffmslndntwn.

Can you write these lines out in full? Who wrote them?

* * *

QUEER WAY TO BUY ORANGES

An orange seller in a fairground was met by three boys. The first bought half of her stock and gave her back 10; the second bought a third of what remained



"See that you drive very carefully."

(Reproduced from "The Commercial Motor.")

and returned two; the third bought half of what she now had and gave her back one. She then had 12 oranges. How many had she at first? H.R.

A CONFUSING BUSINESS

"In twelve years time," said Johnny Smith, "my brother Jim's age will be double mine today."

"That's right," added Jim. "And twelve years ago, adding six years to my age would have given a total that was a quarter of the age my brother will be when he is twice as old as I am now."

How old are Johnny and Jim today?

SOLUTIONS TO LAST MONTH'S PUZZLES

Our first puzzle must have been easy. The two shopkeepers between them lost 1d. by their change in price. They made the mistake of averaging wrongly.

The ladder of our second puzzle was 34 ft. long.

The seven letter name of our third puzzle clearly was MECCANO.

The trick in the weighing puzzle is to rest one end of the tube on the spring balance and the other on a block of wood, or something similar, at the same level. Then the weight of the tube is twice the weight registered on the spring balance.

Mexico is the country concerned in our last puzzle. Taking away the two first and two last letters leaves XI.

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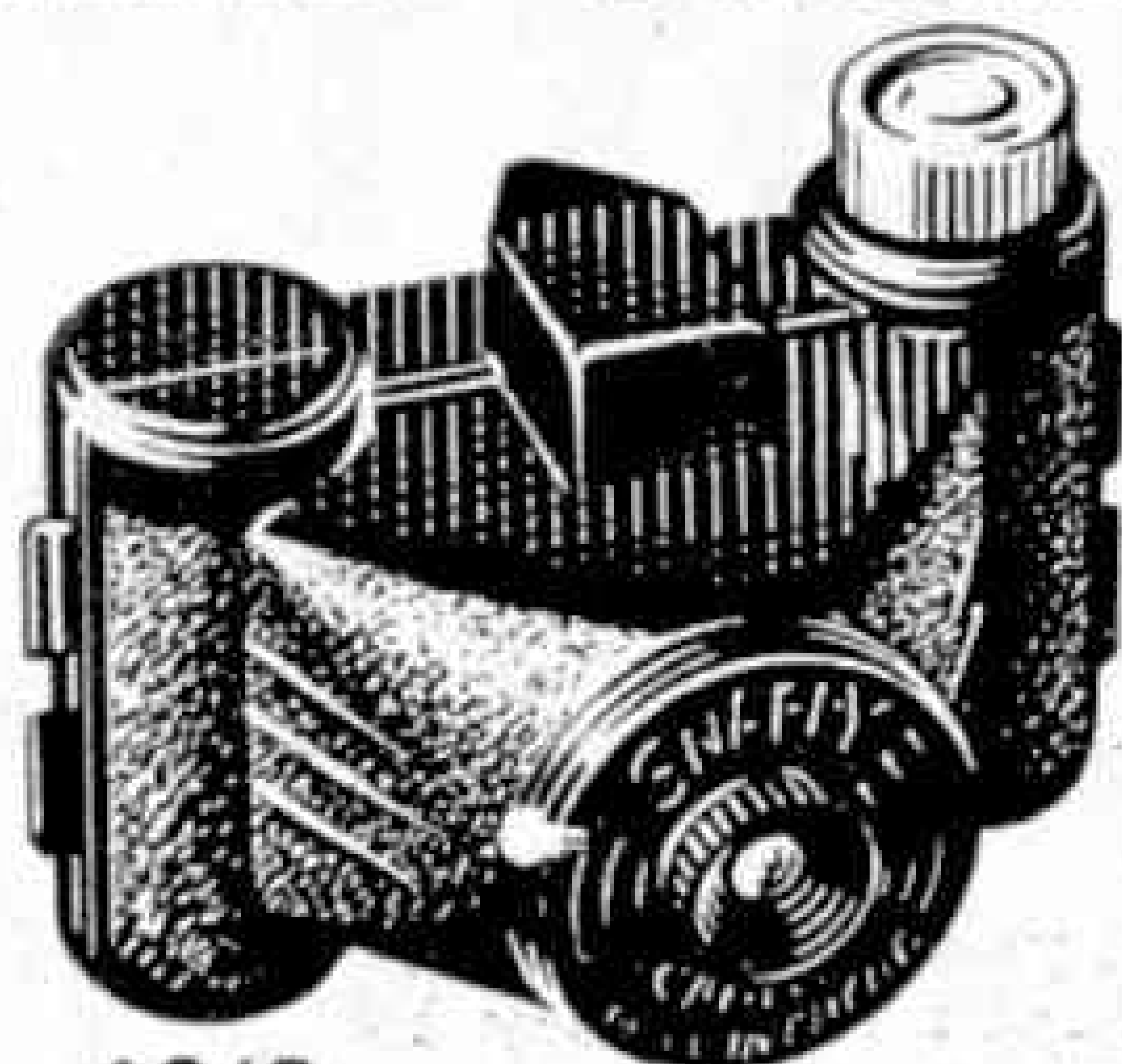
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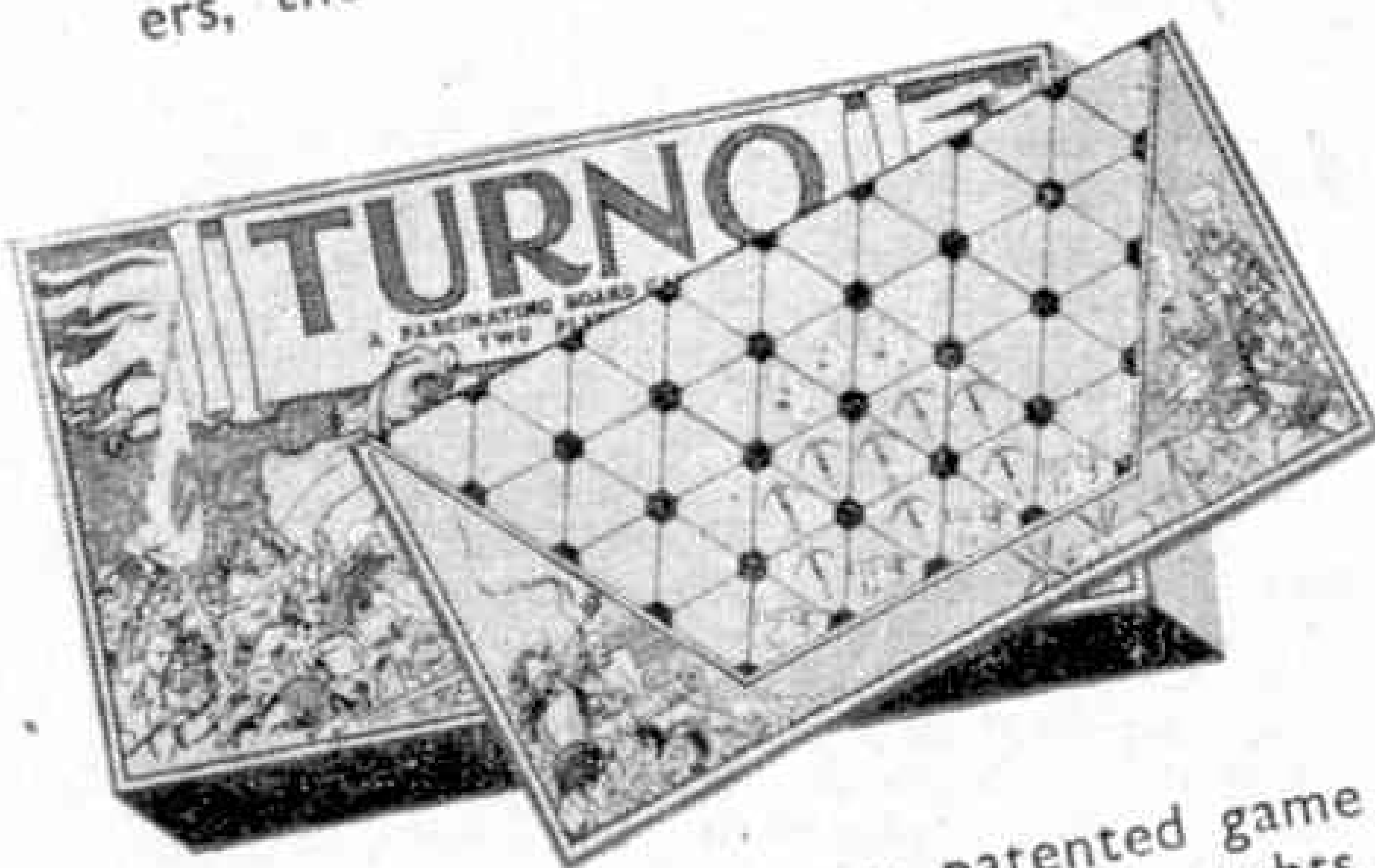
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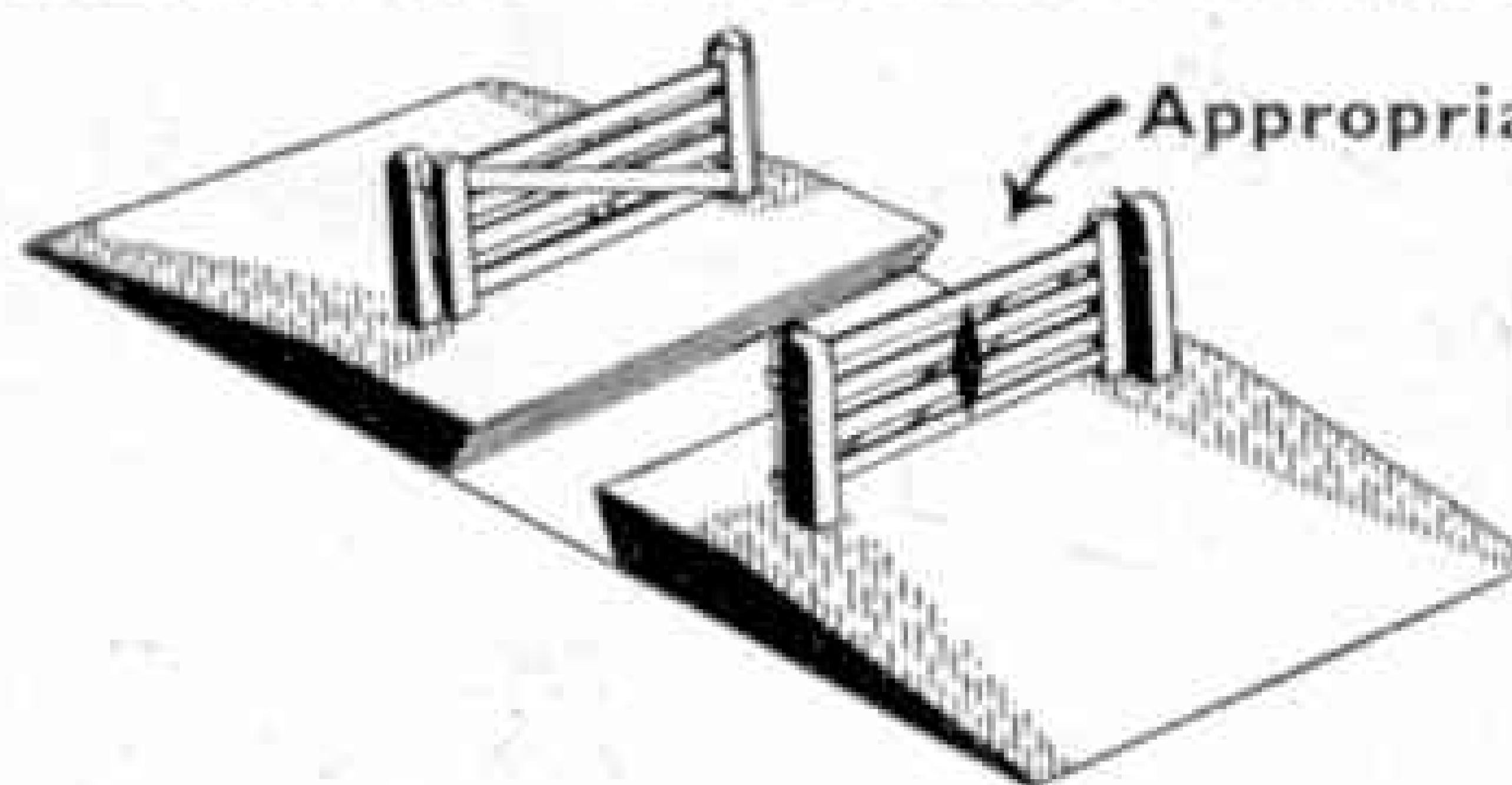
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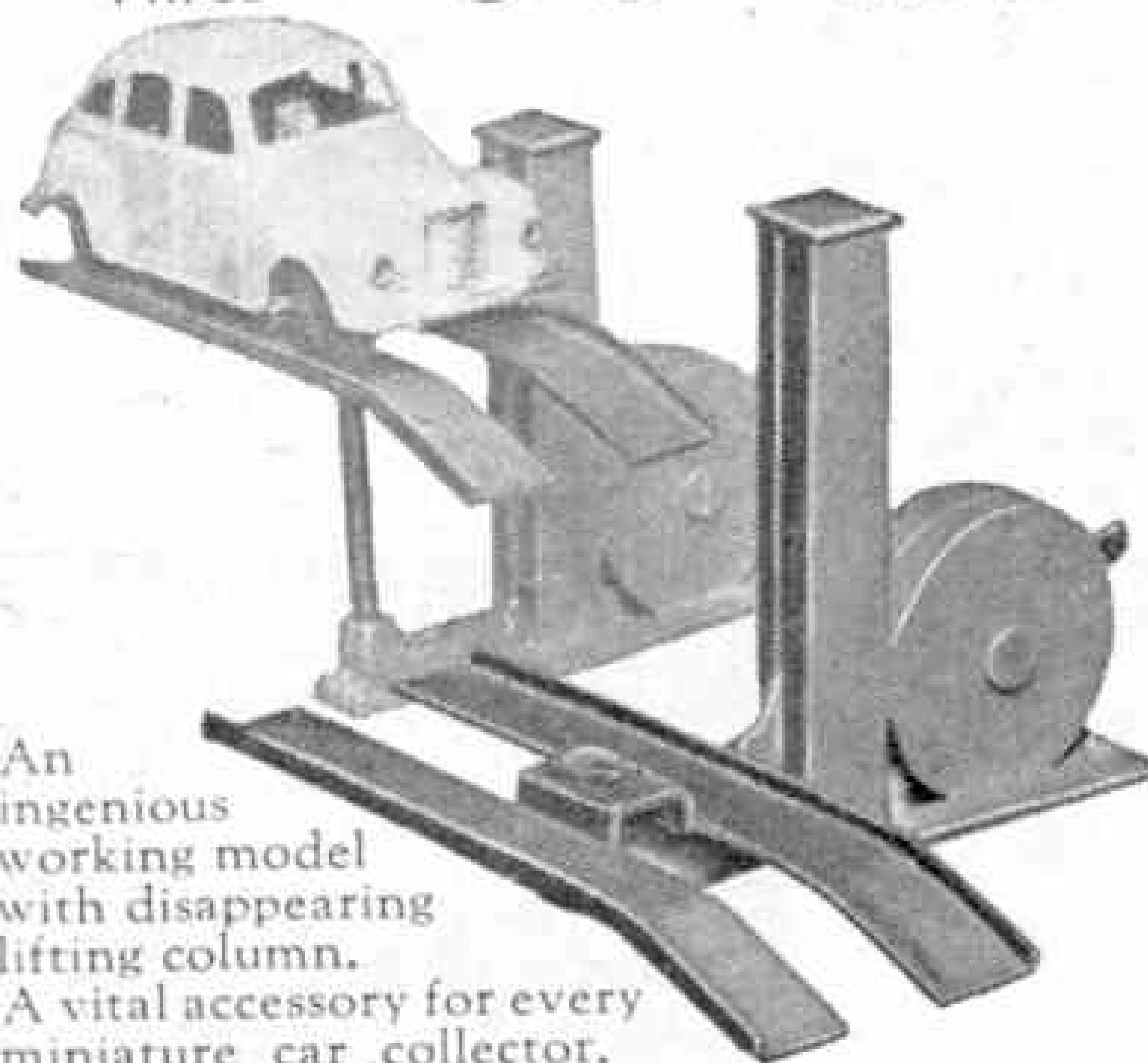
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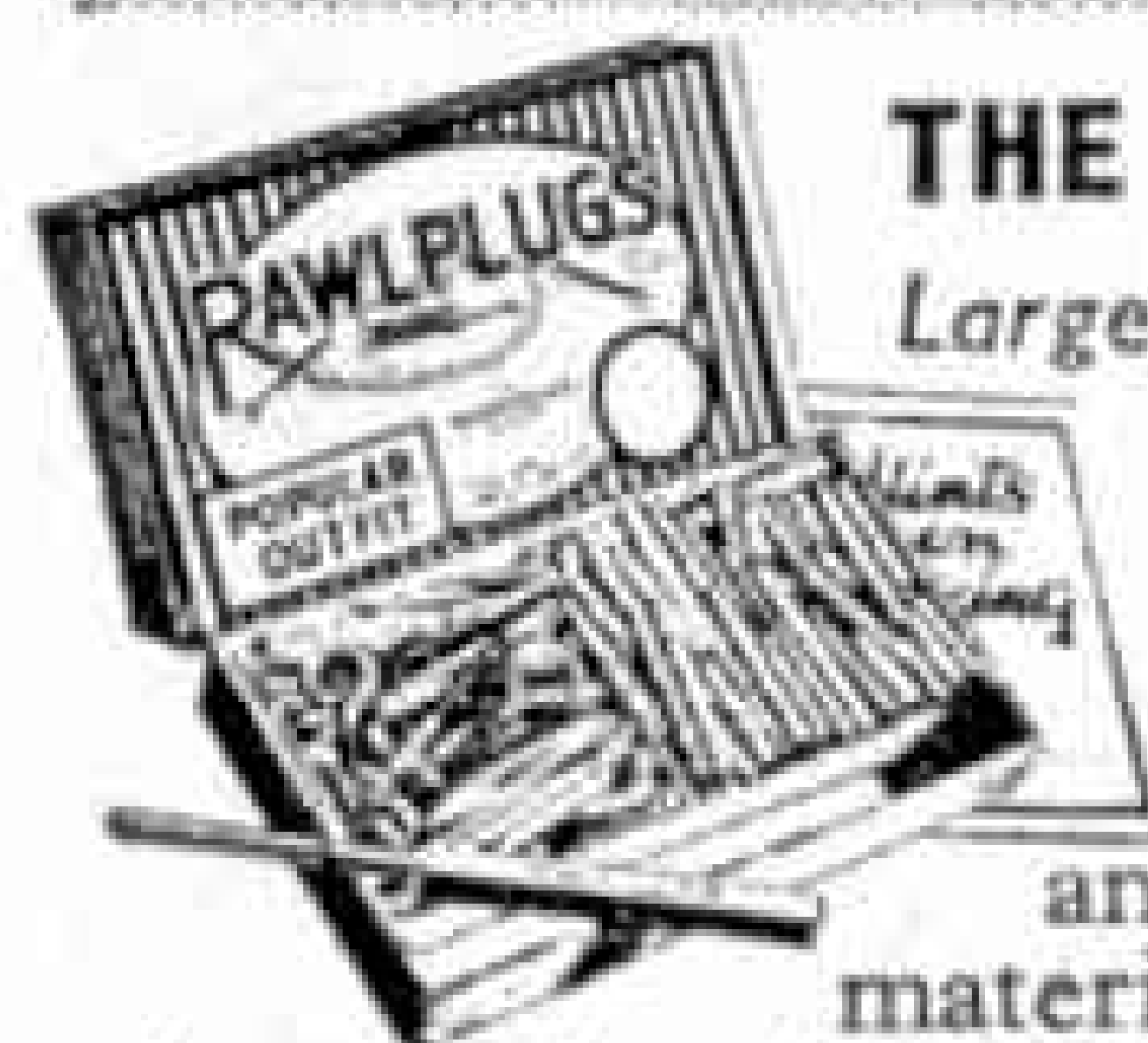
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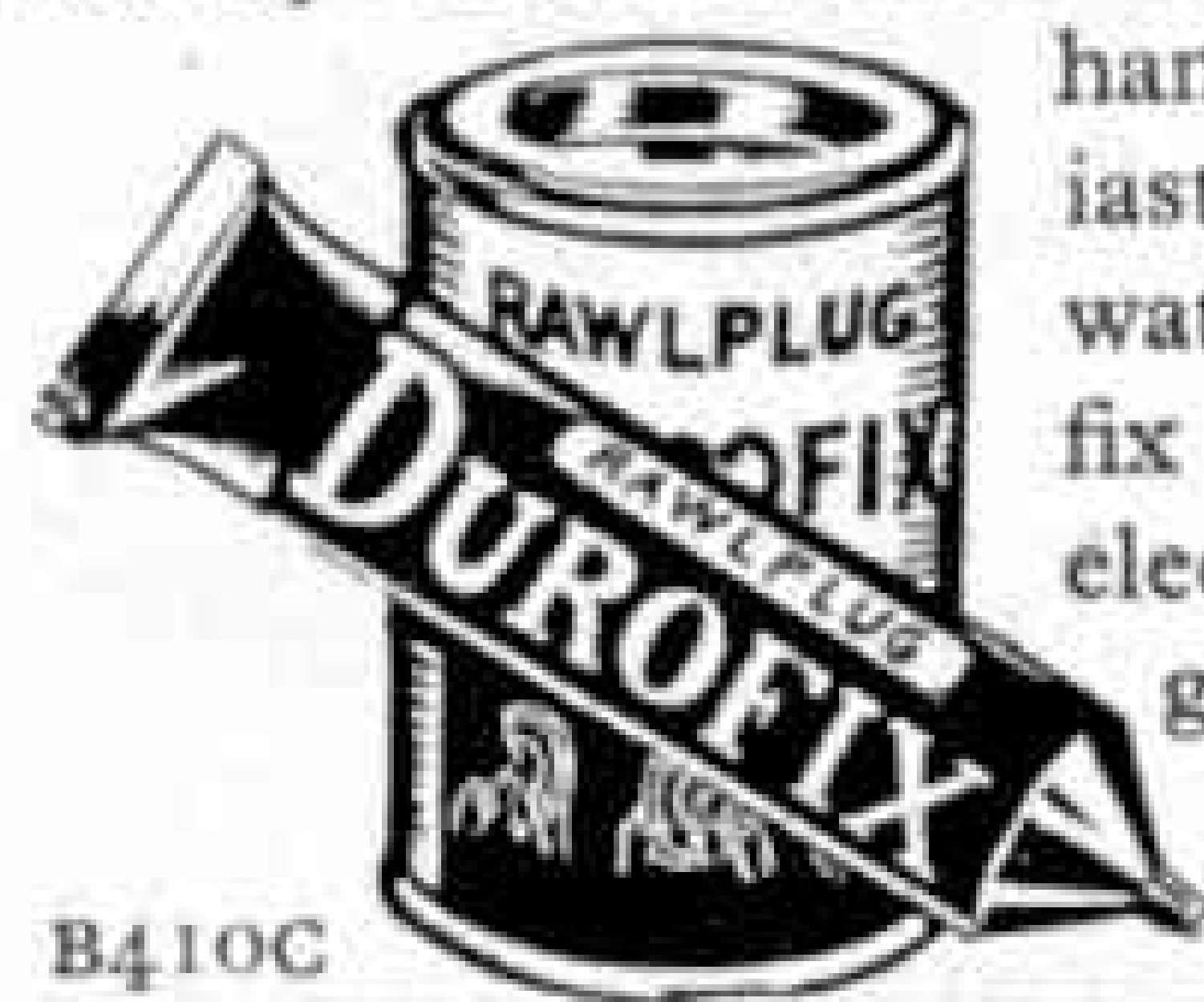
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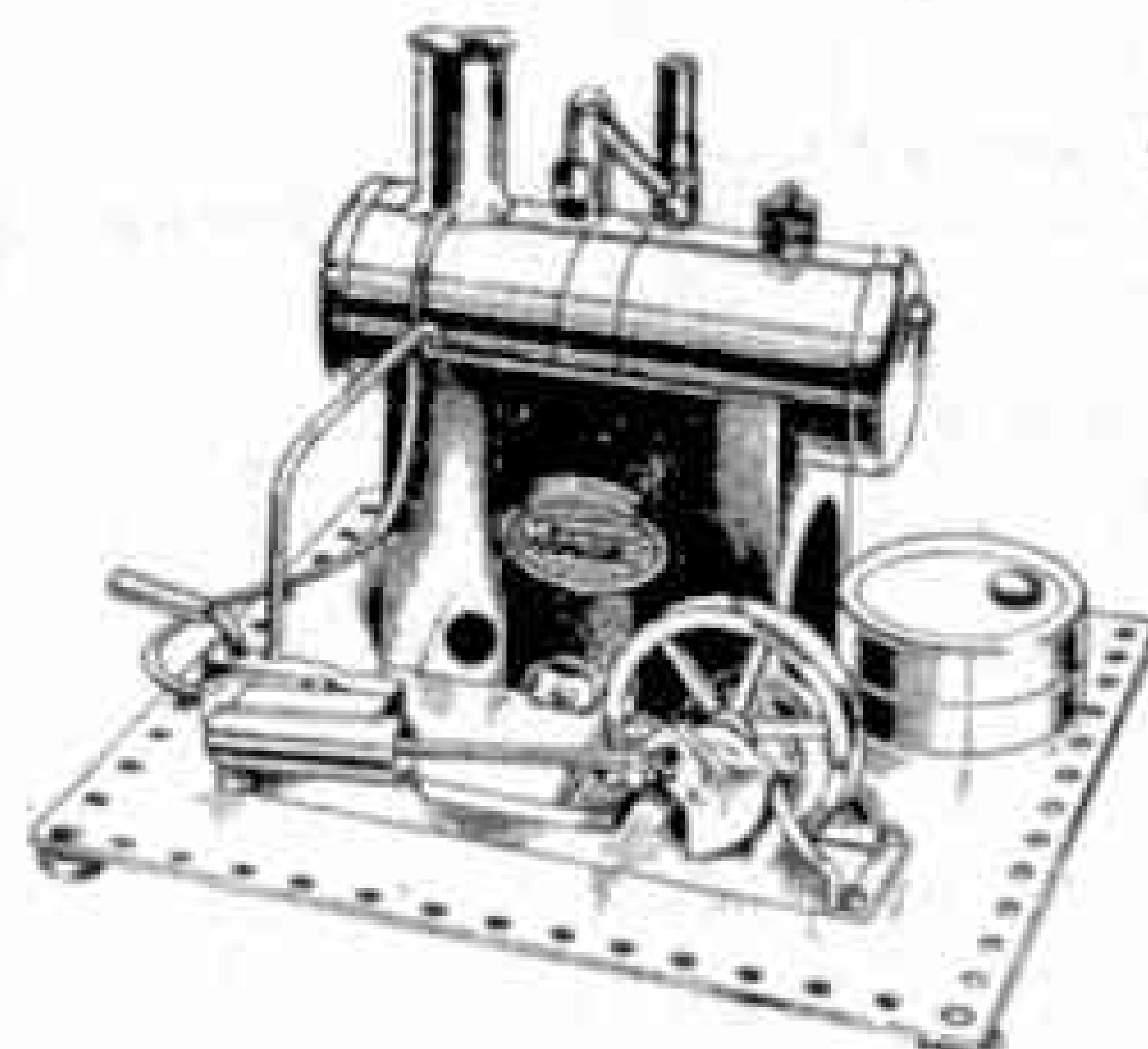
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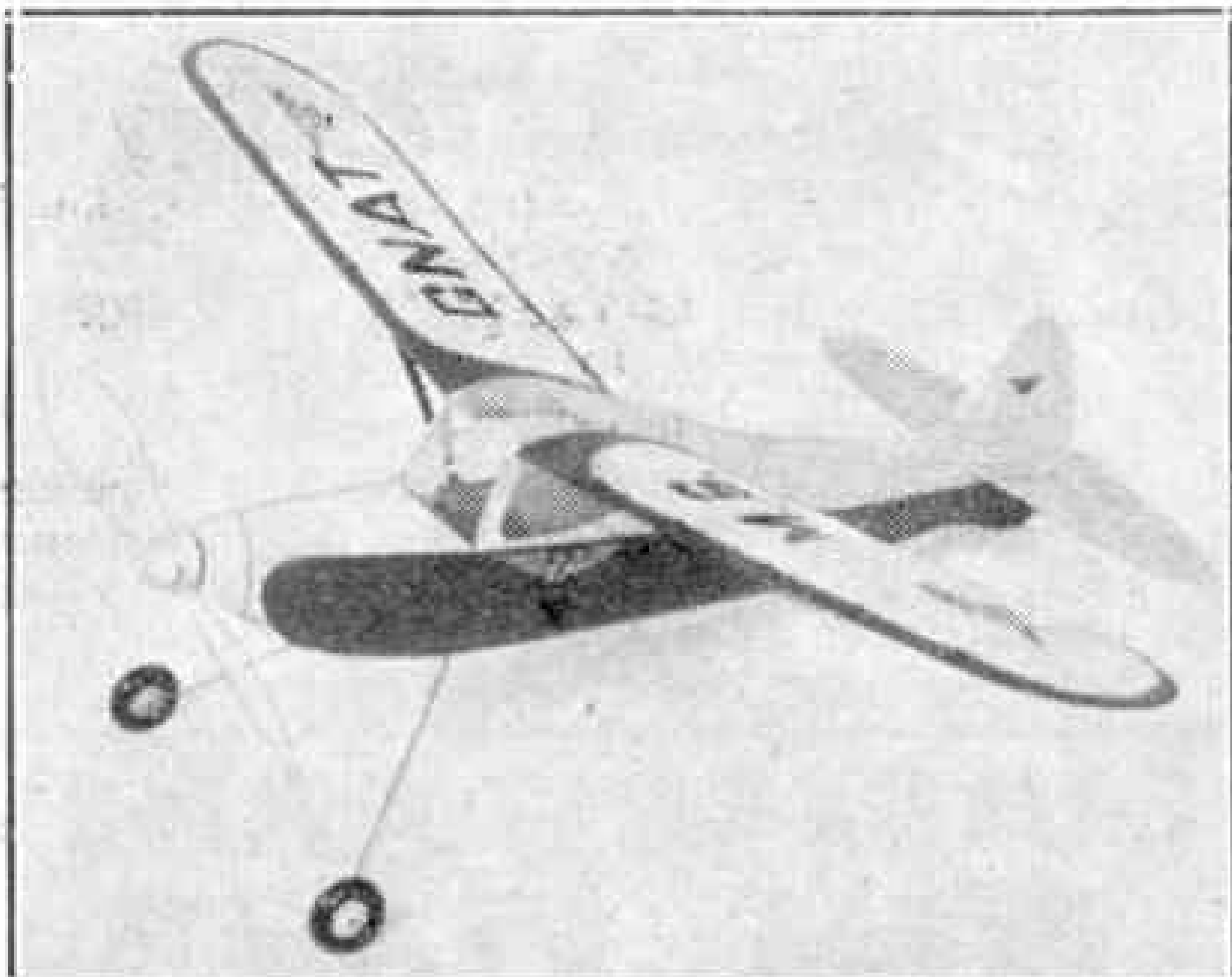
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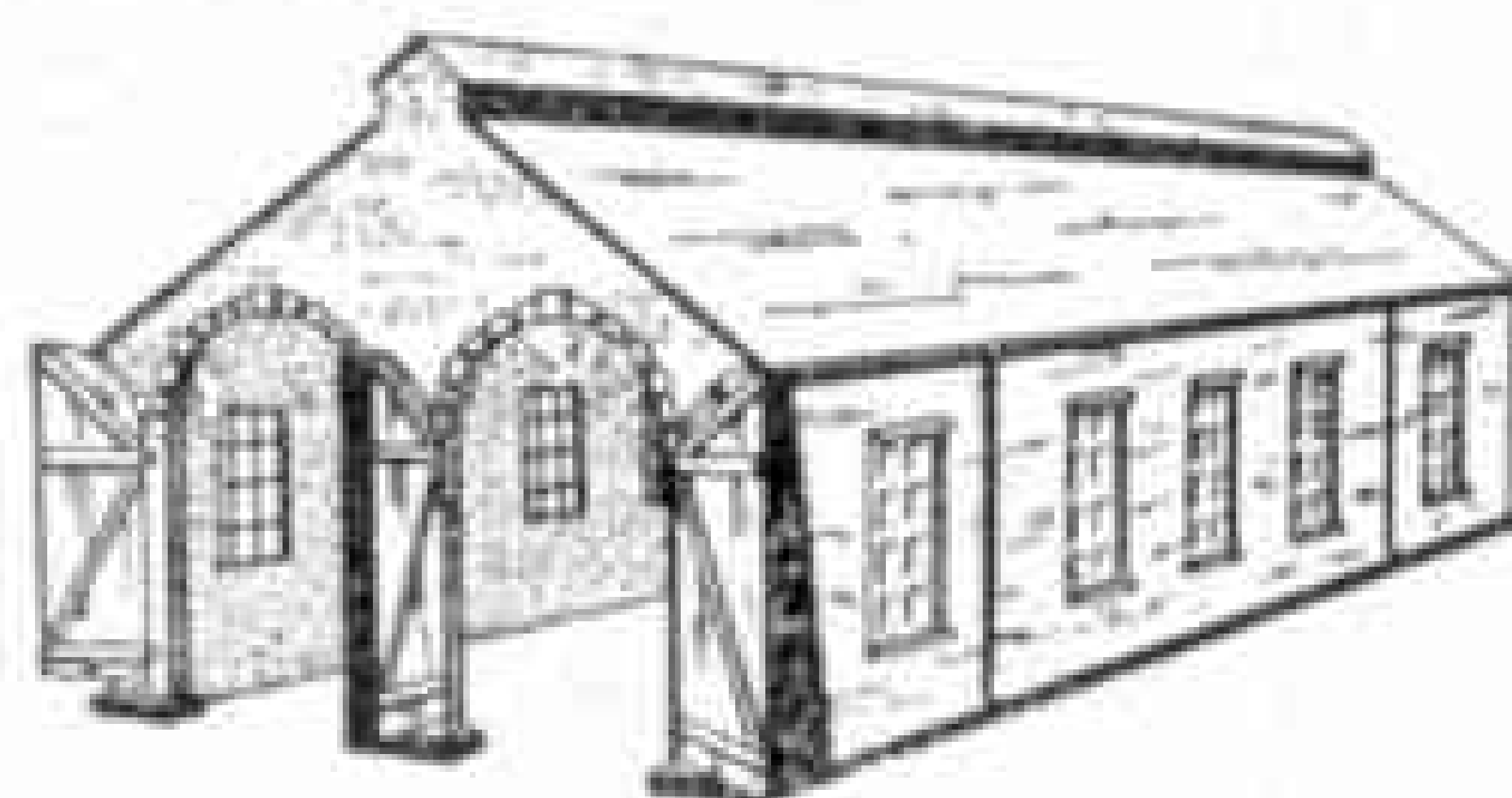
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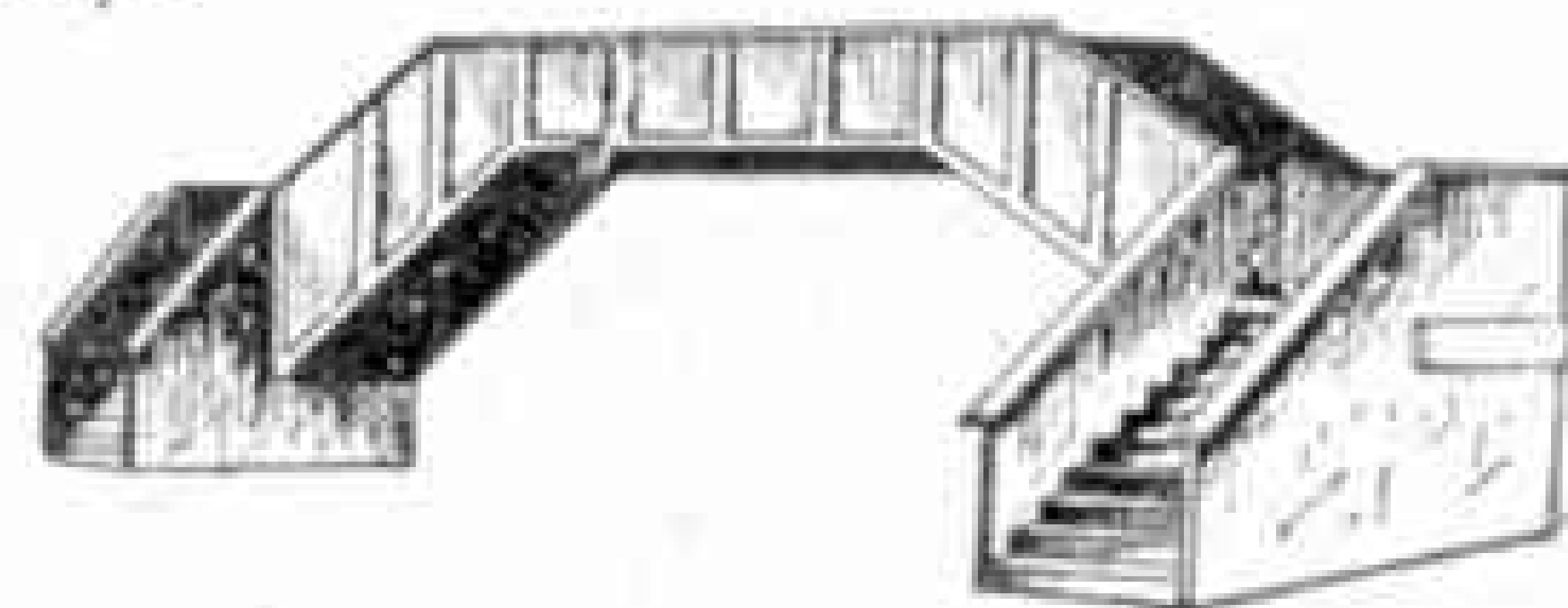
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